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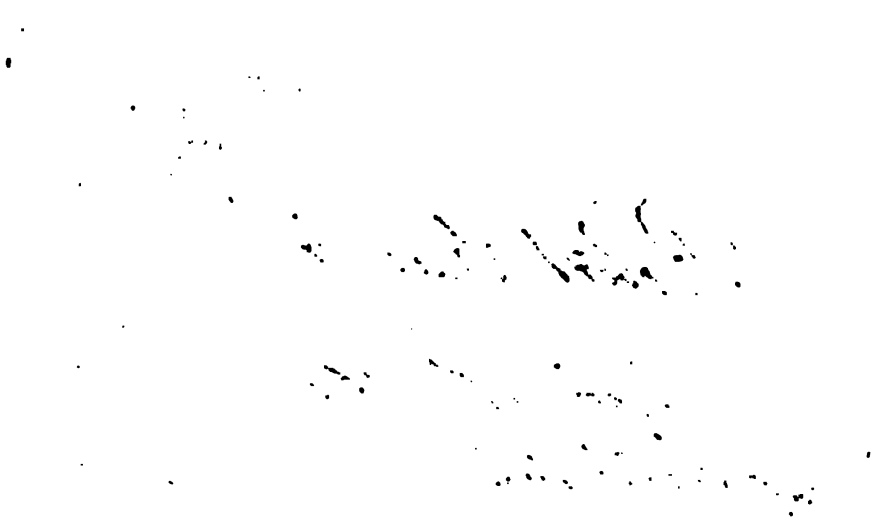

MANUAL

OF

DISEASES OF THE SKIN,

FROM THE FRENCH OF

MM. CAZENAVE AND SCHEDEL,

WITH NOTES AND ADDITIONS

BY

THOMAS H. BURGESS, M.D.,

SURGEON TO THE BLENHEIM STREET DISPENSARY FOR DISEASES OF THE SKIN, ETC.

SECOND AMERICAN EDITION,

ENLARGED AND CORRECTED FROM THE LAST FRENCH EDITION.
WITH ADDITIONAL NOTES,

BY

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PHYSICIAN OF THE NEW YORK HOSPITAL; FELLOW OF THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK; LECTURER ON DISEASES OF THE SKIN, ETC., ETC.

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PREFACE

TO THE ENGLISH EDITION.

A MANUAL of Diseases of the Skin, in a convenient form and at a moderate price, has been long wanted by students, and the junior members of the profession. To supply this desideratum, I have rendered into English the excellent practical compendium of MM. Cazenave and Schedel, a work which contains the substance of M. Biett's views and experience in cutaneous pathology, and which has passed through several editions in France.

M. Biett, during his life, enjoyed the highest reputation as an authority on diseases of the skin; and the only record that we possess of his extensive experience is contained in the present manual of MM. Cazenave and Schedel, with which I have been long familiar. It was my text-book during the two seasons of my attendance at the Hospital of St. Louis, under M. Biett, and since that period I have had increased opportunities in this country of testing its value as a practical guide in the treatment of cutaneous affections. I can conscientiously say that I know of no other work of a similar kind, either in the English or any other language, which is preferable to that of MM. Cazenave and Schedel, nor one which would answer our present purpose so well. The clear and methodical manner in which the diseases are arranged, and the concise and simple style of the work, contrast favorably with the vague and obscure descriptions generally found in treatises on diseases of the skin.

M. Cazenave now fills the office occupied for so long a period by M. Biett, at the Hospital of St. Louis; and this will contribute to make his manual acceptable to English students who visit that excellent institution.

From the complete manner in which the different subjects are treated.

little remained to the translator in the way of addition. He has thought it expedient, however, to add an article on "Glanders and Farcy," diseases which were omitted in the original treatise, and to embody in the form of additions or notes some practical facts worthy of notice. The different parts thus added will be found included within brackets, [ ], or distinguished by the initial "B."

T. H. BURGESS.

29 *Margaret street, Cavendish square.*
October 15, 1842.

PREFACE

TO THE FIRST AMERICAN EDITION.

THE MANUAL of MM. CAZENAVE and SCHEDEL on Diseases of the Skin is too well and too favorably known, both at home and abroad, to require any additional testimony to its value as a practical guide in the study of these affections. First introduced to the notice of the American profession by a translation of the first edition of the original, published in Paris in 1828 (of which same translation a second edition was afterwards published), the book itself has now reached a third edition, the translation of which, by Dr. T. H. Burgess, is now republished.

Embodying, as it does, the results of the long experience and accurate observations of M. Biett, so favorably known for his zeal and industry in the pursuit of this branch of our profession, and drawn up by pupils of this able teacher, who enjoyed the advantages of the same extensive field in which he himself studied, it may be safely recommended to both practitioners and students, as combining faithful and graphic descriptions of these diseases, and sound principles for their treatment.

Having myself adopted it as a text-book in the study of them at the Hospital of St. Louis (well known to be specially devoted to these diseases in Paris), and having also since used it in several successive courses of lectures on the subject in this city, I need hardly say that I fully coincide with Dr. Burgess in his opinion as to its merits.

The present edition has been carefully compared with the original, and numerous omissions supplied of passages which the translator thought proper to omit, but which it is thought, both in justice to the authors and to render the work more complete, ought to be restored. Some errors also have been corrected, which doubtless escaped his observation.

Notes have been added, consisting mostly of the Editor's experience in the treatment of these diseases during the last eleven or twelve years, both in dispensary and private practice, with references to other works, and to the experience of those entitled to confidence. These notes are designated by the initials of his name. H. D. B.

43 *Bleecker street, New York.*
November 1, 1845.

PREFACE

TO THE SECOND AMERICAN EDITION.

The truly practical character of the work of MM. Cazenave and Schedel was the reason for its original selection for republication in this country from among other works on Cutaneous Diseases. The sale of one edition, and the numerous calls for another, have justified the anticipation that it would prove acceptable to the American profession. M. Cazenave still retains the place of physician of the Hospital of St. Louis, which, with his private practice, affords him advantages for the study of this branch of pathology unsurpassed elsewhere, and gives him a deservedly high rank as authority on this subject.

Since the translation of the third edition of the work by Dr. Burgess, a fourth edition of the original has appeared, in which two entire articles have been rewritten, and other parts altered and improved, a proof both of the progress which is constantly being made in this branch of medicine, and of the zealous devotion of our authors to the subject. These articles, one on Scabies and one on Pellagra, and also the greater part of one on Elephantiasis Græcorum, have been translated for the present edition, in which most of the alterations and additions in other parts of the work have been incorporated. Extracts have also been introduced from the valuable Clinical Lectures which M. Cazenave has since that time been delivering at the Hospital of St. Louis, as they are reported in the Gazette des Hôpitaux. Errors have been corrected which escaped notice in the former edition.

Six additional years, during which the Editor has both studied and lectured upon these diseases, have furnished him with materials from his own experience, and from that of others, the more important of which he has interwoven with the notes and references in the former edition; and he trusts that he has been enabled, in this way, to enhance the value of the work, both to the student and the practitioner, without materially increasing its size.

His additions, as heretofore, are marked with the initials of his name.

H. D. B.

43 *Bleecker street, New York.*
November 10, 1851.

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INTRODUCTION.

THERE is no class of diseases which have been, and are still, so much neglected as diseases of the skin; yet there are none so easily recognised, for their characteristic phenomena are appreciable by the eye, while they are at the same time extremely frequent. Perhaps, however, these two circumstances may account for the confusion which has prevailed in the history of cutaneous affections; here, as in many other branches of medicine, the multitude of facts has merely served to encumber the science, without enriching it; and what other results could we expect, when the different stages of the same affection have been described as diseases essentially different from each other, and the various facts on which the science rests have been collected without order, or any view to classification. Want of classification in the first instance, and at a later period imperfect classifications, have greatly contributed to envelope in obscurity the history of cutaneous affections; still, between the end of the sixteenth and the commencement of the nineteenth century, several writers have endeavored to reduce the study of these diseases to some order, and, by grouping together the different forms, have succeeded in throwing much light on this important branch of pathology.

The various classifications may be reduced to three. The first was introduced by Mercurialis (*De Morb. Cut.* 1576), partially adopted by Turner, (*Traité des Mal. de la Peau*, 1743), again brought forward in 1806 by Alibert. The basis of this classification is the seat of the disease; two principal groups being admitted for the head and the rest of the body. The treatise of Mercurialis is divided into two parts; the first is composed of a chapter on general considerations, and of ten others devoted to affections of the head. The second part, which commences thus, "*post vitia capitis sequuntur vitia totius corporis*," contains six chapters. Turner only partially adopted the method of Mercurialis; after a general description of cutaneous diseases, he devotes the second part of his work to those affections which are confined to particular parts of the body. M. Alibert adopted the same method, and called cutaneous affections of the head *teignes*, while he denominated *dartres* those which attacked other parts of the body; he added, however, several species and varieties, founded on the form of the eruption, product of the inflammation, &c. Thus, when the eruption was attended with a scaly desquamation, he classed it under the *dartre squammeuse*, and then added the terms *humid*, *orbicular*, &c., according as it was accompanied by discharge, or presented a circular appearance. Whenever the disease was attended with scabs, he ranged it under a genus which he denominated *dartre crustacée*. Alibert likewise made a great number of sections under which he placed certain diseases that did not admit of being classed with the rest. Thus, besides his five species of *teignes*, and seven species of *dartres*, Alibert described *ephelides*, *pliques*, *cancroides*, *lèpres*, *pians*, *ichthyoses*, *syphilides*, *scrofules*, and *psorides*. This plan was much too vast a one, and cannot be followed as a useful guide in the study of cutaneous diseases.

In the first place, the method of M. Alibert is subject to the objection already advanced against the classifications of Mercurialis and Turner, viz. that of separating from each other diseases which are identical, merely because they are situated in different parts of the body. Again, in arranging his species according to the products of inflammation, he has brought together affections which have little analogy, and separated some which were closely allied. For example, under the genus *dartre squammeuse*, we have inflammatory eruptions essentially different in their elementary characters, march, symptoms, and mode of treatment. How can we have a correct idea of the *dartre squammeuse lichenoïde* and *dartre squammeuse humide*, while we arrange them under the same order, and clothe them with the same characters? The *dartre squammeuse humide*, if taken by itself, merely represents a certain period of an inflammatory cutaneous affection, the elementary characters of which may have been various, and which may have terminated in diseases essentially necessary to be distinguished from each other. On the other hand, Alibert describes, under different species, several affections which are identical; thus, the *dartre furfuracée arrondie* and the *dartre squammeuse lichenoïde* possess the same elementary characters, follow the same course, require the same treatment; in a word, merely differ in the form of the spots, the one being, at the very utmost, but a variety of the other.

These deficiencies could not fail to strike M. Alibert, who abandoned his method for another, which, so far from being an improvement, has no claim whatever to the title of "classification." In his *arbre des dermatoses* we find no trace of method or arrangement; branches shoot forth at the will of the writer, and nothing more.

The next classification which we have to notice is that of Plenck (1789), which was subsequently improved in so happy a manner by Willan. Plenck was the first who rejected all topographical distinctions, and arranged cutaneous diseases according to their external characters. Still he committed the error of mixing up the products of inflammation with the true anatomical characters of the disease. Thus, besides *vesicles*, *pustules*, &c., we have species based upon the existence of *incrustations*, *ulcers*, &c., as if the latter were not a mere consequence of the former, and as if it were a trifling error to divide one and the same disease into two or three different affections, according as it presented itself with pustules, scabs, or ulcers.

Willan adopted the basis of Plenck's method, and on it established a classification which in the present state of our knowledge cannot be surpassed in clearness and precision. He rejected all the products of inflammation, and took the characters of his orders from the elementary lesions of the skin, which he divided into eight orders. The order *squamæ*, it is true, is founded rather on a product of inflammation than on elementary lesions, but its characters are well marked, and belong exclusively to the diseases which are placed under it.

CLASSIFICATION OF WILLAN (1798).

ORDER I. PAPULÆ.
1. Strophulus,
2. Lichen,
3. Prurigo.

ORDER II. SQUAMÆ.
1. Lepra,
2. Psoriasis,
3. Pityriasis,
4. Ichthyosis.

ORDER III. EXANTHEMATA.
1. Rubeola,
2. Scarlatina,
3. Urticaria,
4. Roseola,
5. Purpura,
6. Erythema.

ORDER IV. BULLÆ.
1. Erysipelas,
2. Pemphigus,
3. Pompholyx.

ORDER V. PUSTULÆ.
1. Impetigo,
2. Porrigo,
3. Ecthyma,
4. Variola,
5. Scabies.

ORDER VI. VESICULÆ.
1. Varicella,
2. Vaccinia,
3. Herpes,
4. Rupia,
5. Miliaria,
6. Eczema.
7. Aphtha.

ORDER VII. TUBERCULA.
1. Phyma,
2. Verruca,
3. Molluscum,
4. Vitiligo,
5. Acne,
6. Sycosis,
7. Lupus,
8. Elephantiasis,
9. Frambœsia.

ORDER VIII. MACULÆ.
1. Ephelis,
2. Nævus,
3. Spilus.

Willan's classification, taken on the whole, is a most perfect one; for the errors of arrangement which he committed were not the results of his method, but errors in its application. Thus he places purpura among the *exanthemata;* erysipelas with the *bullæ;* scabies among the *pustulæ;* acne, sycosis, among the *tubercula.* Independently of these faults, however, we find certain others which are not so easily got over. For example, we have *variola* and *tinea* arranged under the same order, although they present a very wide difference in their nature and progress. Besides, it is by no means easy to apply artificial distinctions to disease; there is but a slight difference between a vesicle and a pustule; the bullæ of *rupia* often bear a close resemblance to the phlyzacious pustule of *ecthyma.* Finally, there are several cutaneous diseases which cannot be arranged under any of Willan's eight orders; *purpura,* for example, bears as little affinity to the exanthemata, as it does to the vesiculæ or squamæ: and lupus is not always a *tubercular* affection. Notwithstanding these imperfections, the classification of Willan is clear and precise, because it is based on the elementary characters of the disease, which are invariable, and may be detected at every stage of the affection. The third method, or that of Joseph Frank (1821), would be a most attractive one, if it were applicable to the study of diseases of the skin. Following the example of Retz (1790), and Derien (1804), Frank divides cutaneous affections into acute and chronic. At first sight this seems a very natural division, but a little reflection shows that it is totally impracticable; in fact, how can we divide a work into two parts, in one of which is found the history of a disease during its acute stage, and in the other the history of the same malady during its chronic stage, unless, indeed, we admit with Frank that a given disease is always acute or chronic. This may be true for a certain number, but certainly not for the majority, and hence the distinction laid down by Frank cannot form the basis of a general classification.

Such are the three principal methods of classification that have been applied to cutaneous diseases. None of them, as we have seen, are completely above reproach, but their imperfections are intimately connected with the nature of the subject to which they are applied. The signs of cutaneous disease are, it is true, appreciable by the sight, but we are not yet sufficiently acquainted with the structure of the tissues in which they are seated, to lay down precise and lasting distinctions. It seems clear that a perfect classification of cutaneous diseases should be founded on the special seat of each elementary lesion, but we can never arrive at this degree of perfection until our knowledge of the intimate structure of the skin is more advanced than at present. Mr. Plumbe, who has attempted the classification of these diseases according to their causes, has rather increased the difficulties already existing in this branch of pathology.

CLASSIFICATION OF WILSON.*

I. DISEASES OF THE DERMA.

- **Inflammation**
  - **Congestive**
    - Specific: Rubeola, Scarlatina, Variola, Varicella, Vaccinia.
    - Non-specific: Erysipelas, Urticaria, Roseola, Erythema.
  - **Effusive**
    - Asthenic: Pemphigus, Rupia.
    - Sthenic: Herpes, Eczema, Sudamina.
  - **Suppurative**: Impetigo, Ecthyma.
  - **Depositive**: Strophulus, Lichen, Prurigo.
  - **Squamous**: Lepra, Psoriasis, Pityriasis.
  - **From Parasitic animalcules**: Scabies.
- **Hypertrophy of the Papillæ**: Verruca, Tylosis, Clavus, Pachulosis.
- **Disorders of the Vascular Tissues**: Vascular nævi, Purpura.
- **Disordered Sensibility**: Hyperæsthesia, Pruritus.
- **Disordered Chromatogenous functions**
  - **Augmentation of pigment**: Melanopathia, Pigmentary nævi.
  - **Diminution of pigment**: Albinismus, Leucopathia.
  - **Alteration of pigment**: Ephelis, Lentigo, Chloasma, Melasma.
  - **Chemical coloration**: Oxide of silver stain.

II. DISEASES OF THE SUDORIPAROUS GLANDS.

- **Augmentation of secretion**: Idrosis.
- **Diminution of secretion**: Anidrosis.
- **Alteration of secretion**: Osmidrosis, Chromidrosis, Hæmidrosis.

* Mr. Wilson gives to this arrangement the name of NATURAL SYSTEM of classification. We have introduced it here for the convenience of reference, and also of comparison with other plans. H. D. B.

III. DISEASES OF THE SEBIPAROUS GLANDS.

- Augmentation of secretion . . . . . Stearrhœa simplex.
- Diminution of secretion . . . . . Xero-derma.
- Retention of secretion
  - Duct open . . . Stearrhœa flavescens.
  - Duct open . . . Stearrhœa nigricans.
  - Duct open . . . Ichthyosis.
  - Duct open . . . Comedones.
  - Duct open . . . Small sebaceous tumors.
  - Duct open . . . Sebaceous accumulations.
  - Duct open . . . Cornua.
  - Duct closed . . Sebaceous miliary tubercles.
  - Duct closed . . Calcareous miliary tubercles.
  - Duct closed . . Serous cysts.
  - Duct closed . . Encysted tumors.
- Inflammation of glands and adjacent textures
  - Acne.
  - Sycosis.

IV. DISEASES OF THE HAIRS AND HAIR-FOLLICLES.

- Augmented formation . . . . . Pilous nævi.
- Diminished formation . . . . . Alopecia.
- Diminished formation . . . . . Calvities.
- Abnormal direction . . . . . Trichiasis.
- Abnormal direction . . . . . Felting.
- Alteration of color . . . . . Canities.
- Diseases of the Hairs . . . . . Trichosis Furfuracea.
- Diseases of the Hairs . . . . . Trichosis Plica.
- Diseases of the Hair-follicles . . . . . Narcosis Folliculorum.
- Diseases of the Hair-follicles . . . . . Stearrhœa Folliculorum.
- Diseases of the Hair-follicles . . . . . Inflammatio Folliculorum.
- Diseases of the Hair-follicles . . . . . Favus.

Of the methods just mentioned we have adopted that of Willan, which possesses the greatest claim to our attention; at the same time we have availed ourselves of the numerous and important modifications introduced by M. Biett. We have classed cutaneous diseases, as will be seen in the following table, according to their elementary characters, arranging under distinct heads some which we were unable to comprise under the eight principal orders.

Classification of Biett.

Order I. EXANTHEMATA.
- Erythema,
- Erysipelas,
- Roseola,
- Rubeola,
- Scarlatina,
- Urticaria.

Order II. VESICULÆ.
- Miliaria,
- Varicella,
- Eczema,
- Herpes,
- Scabies.

Order III. BULLÆ.
- Pemphigus,
- Rupia.

Order IV. PUSTULÆ.
- Variola,
- Vaccinia,
- Ecthyma,
- Impetigo,
- Acne,
- Mentagra,
- Porrigo.
- (*Equinia, or Glanders*).*

Order V. PAPULÆ.

* Added by Translator, who has written a chapter on this disease. H. D. B.

Lichen,
Rubigo.
ORDER VI. SQUAMÆ.
Lepra,
Psoriasis,
Pityriasis,
Ichthyosis.
ORDER VII. TUBERCULA.
1. Elephantiasis Græcorum,
2. Molluscum,
3. Frambœsia.
ORDER VIII. MACULÆ.
*Coloratione*s.
Fuscedo Cutis,
Ephelides,
Nævi.
*Decoloratione*s.
Albinismus,
Vitiligo.

ADDITIONAL ORDERS.

ORDER IX. LUPUS.
ORDER X. PELLAGRA.
ORDER XI. MALUM ALEPPORUM.
ORDER XII. SYPHILIDA.
ORDER XIII. PURPURA.
ORDER XIV. ELEPHANTIASIS ARABUM.
ORDER XV. CHELOIDEA.

From the preceding table it may be seen that cutaneous disorders are capable of being reduced to a certain number of elementary lesions; the latter exist constantly in all eruptions classed under each order, and may be discovered at all periods of the disease, if we search for them attentively. Each elementary lesion has its special character, each possesses, as a symptom, its peculiar value.

EXANTHEMATA.—This term is applied to patches of a reddish color, varying in intensity, size, and form, disappearing under pressure of the finger, and terminating in delitescence, resolution, or desquamation.

VESICULÆ.—A vesicle is a slight elevation of the epidermis, containing a serous and transparent fluid, which, however, is occasionally opaque or sero-purulent. The vesicle may terminate in absorption of the fluid, slight desquamation, excoriation, or the formation of small, thin incrustations.

BULLÆ.—Generally speaking, bullæ differ from vesiculæ merely in size; they are small, superficial tumors, caused by effusion of serum underneath the epidermis.

PUSTULÆ.—This term should be strictly confined to circumscribed collections of pus on the surface of the inflamed mucous layer. The contents of the pustules, in drying, produce scabs, and they may be followed by chronic induration, or by red, inflamed surfaces, or sometimes by slight excoriation.

PAPULÆ.—These are small elevations, which are solid, resisting, and never contain any trace of fluid; they may, likewise, give rise to ulceration, but generally terminate in resolution or furfuraceous desquamation.

SQUAMÆ.—The term squamæ is applied to the scales of thickened, dry, whitish, friable, and degenerated epidermis, which cover minute papular elevations of the skin; they are easily detached, and may be reproduced for an indefinite length of time by successive desquamations.

TUBERCULA.—These are small, hard tumors, more or less prominent, circumscribed in form, and persistent; they may become ulcerated at the summit or suppurate partially. In this definition we consider tubercles as elementary lesions, and not those which appear after abscesses.

MACULÆ are permanent changes of color in certain points of the skin, or in the whole of the cutaneous envelope, but unattended with any general derangement of the health.

Under these eight orders we have arranged the great majority of cutaneous diseases; we have, however, made a few changes in the classification of the species. Thus, in our opinion, *pemphigus and pompholix* constitute

one and the same disease; *acne* is clearly not a tubercular affection, so we have placed it under the pustulæ, to which it really belongs. *Erysipelas* is an exanthematous disease, and *scabies* a vesicular one; we have, therefore, transposed them to their respective orders; the diseases arranged under the last seven orders do not admit of being classed with any of the rest, and hence, we have thought it right to consider them apart. We have designedly omitted *anthrax*, *burns*, *cyanosis*, and several other affections which are quite foreign to our subject. The plan of this work did not admit of their being described; and we would, at all events, have been unwilling to encumber it with an account of diseases which, as they are seated in the subcutaneous cellular tissue, are as little adapted for a complete treatise as for a manual of cutaneous diseases.

The characteristic symptoms of diseases of the skin may be mixed up together, and we often find many different elementary lesions coexisting, especially in acute cases. They are often attended by general symptoms, particularly those of more or less severe irritation of the mucous membrane of the air-passages, and especially of the intestinal canal. But many cutaneous diseases are chronic, and last for months or years without exciting any derangement whatever of the general health. The color of cutaneous eruptions and their termination may be considerably modified by the age or constitution of the patient, the coexistence of internal inflammation, and several other circumstances connected with the health of the individual. Thus the accession of some febrile disorder often has the effect of mitigating, or even dispersing altogether, a chronic disease of the skin which may have existed for months; but when the febrile symptoms disappear the cutaneous affection returns. In cases of this kind it is said, "that *the eruption has gone in—has fallen on some internal organ*;" but the inflammation of the internal parts has existed long before the disappearance of the cutaneous disease, and the latter returns slowly—long after the complete restoration of the internal parts to a state of health. Without meaning to decide the question of retrocession, at least for diseases of the skin, we may affirm that things occur in the way which we have just mentioned, and that the examples of true retrocession are rare.

Causes.—The causes of cutaneous disease are very diversified, and at the same time involved in considerable obscurity. They occur at all ages, and spare neither sex. Some forms, however, as the various species of porrigo, the variety of impetigo called *crusta lactea*, and the exanthemata, are almost peculiar to children, while acne prevails more at the period of puberty. Generally speaking, diseases of the skin are more frequent amongst young and adult persons than during old age. The lymphatic temperament is a predisposing cause of cutaneous disease. The influence of profession or trade is sometimes very remarkable; thus workmen who handle acrid substances, or are compelled to expose their hands frequently to intense heat, are very subject to different cutaneous diseases of these parts.

Hereditary tendency is a predisposing cause of much importance; nothing is more common than to find parents and children subject at the same time to diseases of the skin. But it by no means follows that the same disease must be handed down from father to child: thus the parent may have had a scaly affection of the skin, and the children be attacked by a pustular or vesicular one; but sometimes, as in the case of *ichthyosis*, the disease is identically the same in both generations. Amongst the most powerful of individual predisposing causes is that peculiar idiosyncrasy under which certain persons are attacked by diseases of the skin from causes of apparently the most trivial nature: indeed, in many persons of this class we are unable to trace any probable cause whatever. The great extent of the skin, and number of capillary vessels and nerves distributed to it, point out the inti-

mate sympathy which exists between the skin and the internal organs, and explain how readily functional or organic diseases of the viscera affect the tegumentary system.*

The trades which seem to predispose most readily to cutaneous diseases are those which give rise to constant excitement of the skin; hence masons, workmen, farriers, &c., are very subject to these disorders. The influence of trade is particularly marked in causing relapse, and especially when the skin is exposed to the action of heat or acrid substances. But there is no relation between the cleanliness of a trade and its tendency to guarantee the workman from diseases of the skin, or *vice versâ*. Thus, nightmen, scavengers, coal-heavers, &c., are not peculiarly subject to cutaneous affections, while the exercise of a trade which requires cleanliness and repose is far from acting as a preservative.

Season has likewise a well-marked influence on the development of diseases of the skin, which are much more frequent during spring than any other period of the year. The same remark applies to climate. Cutaneous affections are much more severe in warm than in temperate climates. In Greece, Palestine, Egypt, and India, they present appearances and assume a degree of severity unknown in the climates of the north. Constant heat and moisture of the atmosphere also promote the existence of many cutaneous diseases. The parts of Europe in which skin diseases most abound are Britany, Picardy, Flanders, Holland, certain districts in England and Scotland, the borders of Holstein and Norway, and the Crimea. They are most common in capitals or large towns, and chiefly prevail in the dirty and ill-ventilated districts of crowded cities. The influence of light, in the production of some cutaneous disorders, is well known. During spring the rays of the sun instantaneously produce freckles. Larrey mentions a case in which indelible spots were produced by the action of the electric spark. In a word, the influence of heat, light, and electricity, is greater, and deserves much more attention than has been generally bestowed upon it.

The close sympathetic connexion which exists between the skin and stomach is manifested in the clearest manner by the effects which occasionally follow the ingestion of certain alimentary substances. But these effects seem to depend rather on idiosyncrasy than on the nature of the substances ingested. Muscles, oysters and other shell fish, lobsters, shrimps, mushrooms, honey, almonds, strawberries, raspberries, cucumbers, and vinegar, are the substances which most frequently produce the effects now alluded to; the same results, but more rarely, have been known to follow the use of meal, apples, rice, and even the least irritating eatables.

In many cases the influence of this sympathy is slight, in others it is strong. In some warm countries, for example, the habitual use of certain kinds of meat, particularly pork, contributed greatly to the spread of tubercular lepra and the Elephantiasis Arabum, and hence the experience of Moses and Mahomet induced them to forbid the use of pork to Jews and Mussulmans. The restrictive laws concerning this article of diet were evidently founded on the rules of public health; and even as late as 1779, Baron Larrey witnessed the injurious effects of pork and salt food on the French soldiers in Egypt, the continued use of these articles giving rise to more or less inconvenience, while a large number were attacked with *leprous* eruptions, appearing first on the face, and afterwards on the extremities. In Scotland the use of oatmeal is commonly supposed to produce a number of

* This resemblance in form in hereditary diseases of the skin is stated in stronger terms than the above by our authors in the last edition of their work. They say that, although it does not present in every instance the same characteristics as that with which the parents were formerly affected, it still exhibits, in the greatest number of cases, an analogous form. They mention *ichthyosis* as the most remarkable instance.—H. D. B.

cutaneous diseases. In Lombardy, pellagra is attributed mainly to the use of Indian corn, which, although it may not be the exciting cause, is doubtless a predisposing one. The action on the skin of solid or liquid matters employed for food is well known, but this is peculiarly true of wine, coffee, salt, pepper, &c., when taken in excess. On the other hand, disease may be engendered by total abstinence from these stimulants: thus, the *gutta rosea* of water drinkers is cured by the use of stimulant fluids. Gangrenous affections are sometimes produced by the use of putrid meat, and by the flesh of animals which have died with epidemic diseases; and it is well known that eruptions, resembling roseola and urticaria, are occasionally excited by copaiva, belladonna, &c.

Many other facts, which prove the intimate connexion existing between the skin and stomach, are mentioned by authors, and Lorry in particular dwells upon this point. Excesses of diet may certainly act as exciting causes of diseases of the skin, but it is certain that at Paris, as elsewhere, bad food, poverty, and filth, are the most frequent causes of these affections.

The copious perspiration produced by exercise, and the consequent excitement of the skin, show how powerfully it is influenced by the motions of the body. Hence long continued fatigue is a powerful predisposing cause. On the other hand Lorry affirms that want of exercise never gives rise to any cutaneous malady, and that exercise at all violent, immediately after a meal, is injurious to the beauty of the skin. The want of rest likewise has much influence as an exciting cause, producing herpes, acne, erysipelas; and the same remark applies to grief, strong moral impressions, &c.

The humoral pathologists attributed great influence in the production of cutaneous disorders to various derangements of secretion and excretion. The skin was regarded as the natural emunctory of every kind of humor which did not pass off in the usual way. The existence of any disease in the skin was considered as a proof that some morbid humor required to be carried off, and the morbid condition of the integument as a salutary effort of nature to relieve the economy. Again, experience has proved that diseases of the skin often followed the suppression of some habitual discharge, and that evacuants were useful remedies in their treatment. This further strengthened the doctrine of the humorists, and when retention of humors failed to explain the presence of disease, they had recourse to acridity, thus creating a vicious circle, from which it was impossible to escape. We regard the suppression of habitual evacuations as an occasional cause of cutaneous disease, and we think that this cause should not be neglected; but we are far from giving it the same weight as the humorists. We would apply the same remark to acridity of the blood, bile, or lymph, milk, &c., which, in the opinion of some authors, are influential causes of cutaneous disease. Stimulant applications to the skin often give rise to disease of the part. Thus, erysipelas or erythema may follow exposure to the sun's rays; and prurigo occasionally follows sea-bathing, and is often produced by neglect of cleanliness. Frictions with irritant ointments, particularly the citrine, may produce vesicular eruptions; eczema often attacks the hands of persons who handle pulverized substances, or expose these parts to heat; a blister, an issue, or simple puncture of the skin, especially on the scalp, may prove the exciting cause of erysipelas, or of some other cutaneous affection. Many cutaneous diseases arise from contagion; here the disease produced is always identical with the one whence it has arisen; as examples, we may mention small-pox, measles, scarlatina, itch, porrigo, and syphilis; amongst external occasional causes we must reckon that peculiar state of the atmosphere called "the prevailing medical constitution."

External violence, sudden cold, suppression of habitual evacuations, and neglect of regimen, are daily causes of cutaneous disease. Strong mental

emotions, and grief in particular, exercise a remarkable influence. The pupils of M. Biett must have heard him mention several examples of this, and especially the case of a young person who was attacked, within a period of twelve hours, with very severe *lichen agrius*, after having received some unpleasant news.

Cutaneous diseases, as we have already mentioned, frequently arise under the influence of a peculiar individual disposition, through which the disease is determined towards the skin rather than to any other part of the body. This predisposition is sometimes absurdly denominated *dartrous*, a word which only means a great predisposition to cutaneous diseases; but it cannot be denied that certain constitutional affections create this tendency.

Scurvy, scrofula, rheumatism, gout, and especially syphilis, are examples of such exciting causes. In England, scurvy was for a long time regarded as the most frequent of these causes, an error which has been more recently corrected. Syphilis is, above all, worthy of attention, as an occasional cause of cutaneous disease, and that dreadful malady, lupus, is almost always connected with a scrofulous taint of the constitution. The obscure connexions sometimes existing between certain diseases, such as gout, rheumatism, hemorrhoids, &c., and affections of the skin, have been for a long time observed. Erythema, erysipelas, and purpura frequently accompany plethora, with derangement of the menstrual function, in females. Roseola and urticaria often coexist with fever. Finally, pellagra, and some other cutaneous disorders, seem closely connected with irritation of the stomach and bowels. The latter connexion certainly exists, but we must not exaggerate its influence; diseases of the skin may arise from sympathy with the gastro-intestinal mucous membrane, but this is very rare; in the majority of cases this membrane is perfectly healthy, and it is towards it that we commonly direct our treatment; while, on the other hand, a cutaneous disease will disappear on the occurrence of intestinal inflammation, and return when the latter has been dissipated.

A general deterioration of health, arising from age, poverty, and privations of every kind, is often an exciting cause of certain forms of ecthyma, rupia, and chronic pemphigus. In Egypt and other southern climates, the disease called Elephantiasis Græcorum, or tubercular lepra, seems to depend on these causes. Even in our own times we have seen the same affections produced by the same causes; and similar causes seem to have exercised great influence during the middle ages upon the propagation in Europe of the lepra brought from Palestine.

The cases to which we allude occurred in the practice of M. Biett. One was that of a young Portuguese student, who, while flying from the satellites of Don Miguel, was compelled to hide himself in a cave near Coimbra, where he underwent the severest privations; he was attacked by tubercular lepra, and when we saw him his case was hopeless. The other occurred in the person of a young German, on his way to the United States; he had walked with several of his countrymen from Nassau to Havre, but their resources had failed them on their arrival at this latter town, and they passed the winter in the greatest poverty, exposed to cold, and lying on the bare ground. He was seized with elephantiasis of the scrotum, and died in the hospital of St. Louis, whither he had been sent from Havre.

M. Biett also saw a case of *porrigo favosa*, covering nearly the whole body, and produced by long confinement with privation in a low, damp prison.

Experience shows that diseases of the skin may be caused by what we call, for want of a better name, *critical* influences; nature thus sets up a salutary derivation towards the skin. As to the cause of the *special* form which cutaneous disease may assume, we are completely ignorant; we can-

not tell why the exciting cause should in one case produce a pustule, in another a vesicle, in a third a papule, yet it is to this obscure point all our efforts should be directed, for on it probably depends the secret of the precise seat of cutaneous diseases.

Diagnosis.—The differential diagnosis of diseases of the skin is one of the most important points connected with their history. Without it, how can we form an opinion respecting them, or decide upon the proper course of treatment? Calling an eruption *scabies*, when it is *lichen*, or *prurigo*, or *eczema*, has often caused great uneasiness in a family; while declaring an eruption to be *syphilitic*, when it is of an entirely different character, or overlooking that disease when it really exists, has given rise to serious evils.

In diagnosis consists the entire study of diseases of the skin. We shall, therefore, endeavor to lay down some general rules to guide us in attaining this important knowledge.* The chief point is to determine the elementary lesion; this done, we have merely to compare the disease with the few which possess the same elementary characters. In cases where the elementary lesion remains unaltered, we have simply to ascertain whether it be a *papule*, *vesicle*, *scale*, &c., and this generally is a very easy task. Our next step is to determine the species, and in this we are aided by the *form*, *seat*, *progress*, &c., of the eruption.

For example, a patient has on the inner side of the arm, between the fingers, &c., a number of *small collections of serum*, distinct, acuminated, transparent at the point, and accompanied by itching, &c. On carefully examining, we find that the elevations contain no pus, that they are not solid and resisting, that they are not papular eminences covered by a scale, nor an injection of the skin which disappears under pressure; the disease is therefore *vesicular*. We have, then, to find out to what species of vesicular affection it belongs, and in carrying still further this process of exclusion, we soon reach a positive diagnosis. It is neither *miliaria* nor *varicella;* for these are accompanied by constitutional symptoms, and besides, the vesicles in the former of these diseases are globular and very numerous, and in the latter they are larger and more inflamed; it is not *herpes*, for the vesicles in this are collected together in groups, while in the present case they are scattered. It must, therefore, be either *eczema* or *scabies;* but the vesicles of *eczema* are flattened, while here they are acuminated; in *eczema* they are usually more or less grouped, while here they are distinct; *it must therefore be scabies.*

The example which we have just given is a simple one; but the diagnosis is sometimes more difficult, even when the elementary character of the disease remains in part; thus scabies, which is generally detected with readiness, may sometimes present some difficulties of diagnosis, especially when the vesicles have been destroyed by scratching; but in such cases we are assisted by various secondary indications, such as the seat of the eruption, the appearance of its accidental variety, the precursory and accompanying symptoms.

But a mere knowledge of the elementary character of a cutaneous disease is not sufficient for its diagnosis; this character may have disappeared, and given place to the secondary or consecutive lesions. The fluid of a vesicle may, for example, dry off and leave a small incrustation; a pustule may be converted into a scab, and the latter give way to an ulcer; hence it is necessary that we should study these secondary lesions, and know to what primary characters they correspond. Incrustations may succeed vesicles, vesico-

* The authors add here, in their last edition, that it is in diagnosis the classification of Willan exhibits its very great advantages; for, they say, even if a natural classification of these diseases should at some future time be formed, that of Willan will always be retained for the purpose of diagnosis. H. D. B.

pustules, and papules; scabs occur in most pustular diseases, and ulceration may be a consequence of rupia, ecthyma, &c.

In cases like the foregoing, we must first ascertain the nature of the secondary lesion, then determine its corresponding primary element, and finally pursue the course just pointed out. For example, a patient comes to us with a disease of the skin, characterized by thick, rough, yellow scabs, which cover a large portion of the extremities, especially the legs, and when they fall off, expose superficial excoriations; the latter discharge purulent secretion, which dries up, and forms fresh scabs, these being the most characteristic features of the disease. Now it is easy enough to tell at once that this is a pustular affection, but not so easy to determine its species. The disease is evidently neither *variola* nor *vaccinia;* the pustules of *ecthyma* are large, isolated, and frequently covered by black, tenacious scabs, which end in ulceration; it is neither *acne* nor *mentagra*, the pustules of which rarely ever give rise to scabs, and are especially followed by chronic indurations. The only affections, then, that remain are *impetigo* and *porrigo*, and we have merely to compare the character of these two species in order to decide. It is unnecessary to enumerate here the signs by which we know that the disease is not porrigo; it is therefore *impetigo*, and as the scabs are scattered irregularly over the limb, it is *impetigo sparsa.*

In the preceding cases we have supposed that there were no remains of the distinct elementary lesion, while, in the great majority of cases, on the contrary, some may always be found perfectly unchanged in the neighborhood of the affected part.

In some cases different elementary lesions occur in the same subject; but even here we always find some predominant form, of which the rest are but complications. However, it may happen that we cannot ascertain at once the true nature of the disease. This occurs in certain chronic affections, where the elementary character gradually disappears, and seems confounded in a different order of phenomena. Even here a sudden exacerbation of the disease, or a return to health, may develope its primary character. The general remarks which we have just made do not apply to those orders which are not characterized by special elementary lesions; but the latter are distinguished by phenomena which we cannot mistake; or even, when they assume, as in syphilis, the elementary forms of other cutaneous diseases, they present certain special appearances, which leave no doubt about their nature. Finally, we must neglect nothing which can assist us in our diagnosis of cutaneous diseases. Beside the elementary characters, there are many signs, as the seat, form, and color of the eruption, its progress, condition of the patient, &c., which strike the practised observer, and enable him often to dispense with details.

Prognosis.—The prognosis of diseases of the skin is intimately dependent on their differential diagnosis. They are rarely dangerous enough to compromise life, if we except the exanthemata. The prognosis of tubercular lepra, elephantiasis, and lupus, is, however, always unfavorable. Scaly diseases are probably more intractable than pustular or vesicular; but in all cases our opinion should be guarded, for trifling cutaneous affections are often extremely obstinate of cure.

The general state of the patient's health, and the influence which it exercises on the disease, require our utmost attention. In some cases the cutaneous disorder is a salutary effort of nature, and we should avoid interfering with it, or proceed cautiously and slowly when it is necessary to get rid of it; the practitioner must, however, be guided by an attentive study of the patient's constitution, the state of the viscera, and the history of the case. We do not belong to that class of practitioners who attribute so much importance to the sudden disappearance of cutaneous disease. We

know that many times even chronic affections of the skin gradually disappear under the influence of some visceral irritation, and return slowly as the patient is restored to health. The vulgar will tell you, in such cases, "*that the disease went in upon some important viscus, and came out again;*" but the internal inflammation therein felt preceded the disappearance of the eruption, and the reappearance of the latter was slow, and long after complete recovery had taken place. We regard equally as an unfounded prejudice, what certain authors say respecting the retrocession of itch, and the numberless ills which they pretend that the unseasonable cure of this disease inflicts upon mankind. Such reveries we leave to Hahnemann and his credulous followers; while we recognise the prudence of precautionary measures in the treatment of cutaneous affections of long duration, to which the system has become, as it were, accustomed, and the sudden removal of which would not be without danger.

Treatment.—Diseases of the skin have been long submitted to a particular line of treatment: viz. the use of bitters, and of remedies containing sulphur, which seems to have excluded all others; within the last few years, however, several remedies of great value have been discovered, but careful observations were wanted to determine their real value, and the cases to which they were applicable; in supplying the latter knowledge, M. Biett has rendered a most important service. He was the only physician in Europe who had made a complete series of experiments on the treatment of cutaneous diseases, with different remedies; and it is a matter both of surprise and regret that many of the results which he has obtained should have been published by persons who conceal the source whence their knowledge was derived.

The remedies employed in the treatment of diseases of the skin may be divided into local and general. Of the former, which are almost always used, either alone, or at the same time with general treatment, emollient remedies (among which we reckon baths) are those with which we should, generally speaking, commence. They often cure the disease without the assistance of any other means. To mention the great variety of local remedies employed would occupy too much of our time; the principal are decoctions of bran, barley, emollient flowers or roots, solutions of gelatine, potato flour, poultices of ground rice, local or general baths, milk, &c. Fatty substances are often employed in the form of ointment or pomatum, but we should be very careful how we use them; they should always be perfectly fresh, and even then are subject to become rancid; hence the cerates are preferable. Lorry thinks that fatty matter acts by causing the accumulation of insensible perspiration on the surface of the skin, and thus producing the effect of a kind of local bath.

Among local soothing remedies we would place certain preparations of lead, hydrocyanic acid, cherry-laurel water, and the cyanuret of potassium, which often act like a charm in appeasing itching. Heberden recommends local stimulants in cases where the itching is very severe, but Bateman justly remarks that this treatment only applies to cases in which the epidermis remains intact; otherwise emollient and soothing remedies are preferable.*

The temperature of emollient applications, such as baths, poultices, embrocations, &c., should not exceed 90° F. But when there is much heat, pain, and itching, great benefit may be derived from water cooled down to

[* The student will derive much assistance from a good magnifying glass, while observing the progress of the eruption during the early period of the disease. It will also materially facilitate the diagnosis in difficult cases, by giving the observer a more correct idea of the elementary lesion, than he could obtain with the naked eye.]

36° F. The linseed meal so often employed for poultices is seldom fresh, and frequently causes irritation, or even pustular eruptions.*

Finally, amongst local means we must not forget leeches. These should never be applied on the diseased skin, but in the neighborhood, unless, indeed, the quantity of blood abstracted is such as will compensate for the irritation produced by their bites. Successive applications of leeches will generally be required.

Local excitants are of various kinds, and often very useful; they seem to modify the vitality of the skin. They comprise vapor baths and douches, alkaline baths, sulphureous baths of every kind, lotions, or ointments containing mercury, sulphur, iodine, &c. When speaking of the particular treatment of each disease, we shall consider these preparations more fully. When an increased degree of irritation is required, great benefit may be derived from blisters applied after Parè's plan. Should it be necessary to change the state of the diseased surface completely, or check the progress of some destructive malady, we have recourse to caustic. Acids in various states of dilution, and especially the hydrochloric, may be employed, or the nitrate of silver passed lightly over the surface; in some cases a single application is sufficient, in others we must frequently use the caustic before a lasting effect is obtained.

In cases of *lupus* more powerful caustics are required; the arsenical paste of Còme is one of the most efficacious, but it requires a practised hand for its use; we have also the binitrate of mercury, either alone or dissolved in concentrated nitric acid; or the chloride of zinc may be employed with advantage instead of them.

Before speaking of constitutional treatment we may ask, is it always necessary to have recourse to general remedies? May we not obtain a cure by local means alone?

In some rare cases, where the cutaneous disease is slight and limited in extent, local means may suffice; but, generally speaking, a constitutional treatment is necessary, for cutaneous diseases are almost always connected with some derangement of the general health, against which local remedies are powerless.

The constitutional means employed in the treatment of diseases of the skin are extremely various. They comprise bloodletting, purgatives, alkalies, acids, antimonials, preparations of sulphur, sudorifics, and, finally, the tincture of cantharides and preparations of arsenic or mercury, which evidently act in a direct manner on the skin.

General bloodletting is required, not only in various acute diseases of the skin, but in many others, where, at first sight, excitants might appear to be requisite. Even in chronic affections of the skin, it is very useful in young and robust patients.

Purgatives are frequently employed in the treatment of cutaneous diseases. When the alimentary canal is in a healthy state, they are very beneficial in effecting a slow and long-continued derivation; hence we should generally employ them in small doses, and suspend their use from time to time. The remedies in common use are calomel, the soluble sulphates of magnesia and potass, jalap, aloes, gamboge, cream of tartar, &c.

Alkalies and acids, when properly diluted, are very useful in allaying itching; they also act directly on the skin. Hydrochloric acid is the one most commonly employed.

* Hence, our authors say (edit. 1847), that they have for a long time substituted potato starch for flaxseed, and have, for several years past, in many cases, discontinued the use of moist, and even of emollient applications, and have sprinkled the affected surfaces with dry starch or powdered rice, with the best results.—H. D. B.

Antimonials were much in vogue amongst the earlier practitioners, who placed far greater reliance on them than they deserve.

Preparations of *sulphur* are by many regarded as specific in diseases of the skin. They are, in truth, highly efficacious, but we must confess that they sometimes fail, and occasionally aggravate the disease. But their use, whether locally or internally, requires more experience and tact than is generally supposed, and it is a great mistake to employ them indiscriminately, as too many practitioners do. Sulphureous waters are either natural or artificial; they may be used in baths, douches, or in vapor. Sometimes they are employed alone, at other times diluted with gelatine or other emollient substance.*

Sudorifics comprise antimonial remedies, of which we have spoken already; the remainder, such as sarsaparilla, guaiacum, &c., are now rarely used, except in cutaneous syphilitic disorders. Dulcamara, saponaria, rhus radicans, and daphne mezereon have been highly extolled by some English physicians.

M. Biett has obtained the greatest benefit from the use of tincture of cantharides and the preparations of arsenic. The English have long since been in the habit of employing them, and in France the experiments of M. Biett prove, in the clearest manner, their efficacy. Yet notwithstanding this evidence, the remedies now alluded to have been attacked in the most extraordinary manner. They deteriorate, it is said, the health, and give rise to disorders which break forth after the lapse of time with great violence. These attacks are completely unfounded, and have become futile, in face of the numerous facts which constantly prove their absurdity.

The powerful remedies of which we speak may, when carelessly or ignorantly administered, produce certain accidents, but the same remark will apply to many other medicinal substances, as corrosive sublimate, tartar emetic, quinine, &c. We must be familiar with their use, and carefully watch our patients while taking them. Besides, we have seen them employed in a great number of diseases of the skin with the following results in a majority of cases:—1st. Complete and lasting cure of the most obstinate affections. 2d. Occasionally slight derangement of the health, requiring the remedy to be suspended for a few days only. 3d. We have never met with those dangerous accidents so much talked of by a set of designing persons, who have no facts to support their opinions. We are, therefore, prepared to assert, and experience is there to support us, that arsenic, when properly administered, is an *heroic* remedy in the treatment of cutaneous disease; and we furthermore can affirm, that we have seen patients, months and years after having undergone a course of this medicine, who never experienced the slightest inconvenience from it.

[* The vapor of a combination of sulphur and iodine will often be found very useful as a local application in some of the tubercular and squamous diseases; especially in lepra vulgaris. See LEPRA.]

DISEASES OF THE SKIN.

EXANTHEMATA.

The exanthematous diseases are inflammations of the skin, characterized by redness, which disappears for a moment under pressure of the finger, and usually accompanied by constitutional symptoms.

Erythema, erysipelas, roseola, measles, scarlatina, and urticaria, belong to this class. The exanthemata may spread over the whole of the cutaneous surface, but in general some are confined to certain limits, while others are diffused, and cover a great part of the body. The special seat of these diseases appears to be the superficial layers of the cutis vera, and especially the vascular layer. In some severe cases, however, the inflammation not only extends to the different layers of the skin, but also to the subcutaneous cellular tissue. With the exception of urticaria, erythema, and chronic or intermittent erysipelas, these affections generally pursue an acute course. Their duration varies from one to three weeks. Urticaria and one of the varieties of erythema may be prolonged for several months, and even for years.

The exanthematous diseases are generally preceded by a certain degree of languor, by rigors, thirst, and anorexia; but each disease has its own peculiar characters. Thus, each form presents redness of the skin, which disappears under pressure of the finger, and immediately returns on removal of the pressure; but this redness is much less in roseola than in erythema and erysipelas, and may be either temporary or persistent in the different forms of urticaria; in which latter affection, it is sometimes diffuse, and sometimes circumscribed; hence the cause of the irregularly formed patches by which it is so often characterized. Erysipelas is accompanied in particular with pain, heat and swelling; and urticaria, on the other hand, is attended with a smart itching.

The exanthemata are frequently complicated with gastro-intestinal inflammation, and with cerebral and pulmonary diseases. It is owing to one or other of these complications that they sometimes terminate fatally. They generally terminate by resolution. The epidermis becomes furfuraceous, and falls off, or else scaly lamellæ form of various shape and extent. In scarlatina, the cuticle desquamates repeatedly; and erysipelas may be followed by suppuration and gangrene. *Post mortem* examinations of persons dead of these diseases do not throw much light on their nature and causation. A brownish red tint is sometimes observed in the vascular network of the skin, especially if that tissue had been highly injected during the progress of the disease. Serum, and even a small quantity of blood is often found effused in the cutaneous tissue. In phlegmonous erysipelas, pus is infiltrated into the subcutaneous cellular membrane.

Measles and scarlatina are propagated by contagion, the nature of which is entirely unknown, and rarely ever occur more than once in the same individual during life. The rest of this class of affections may result from more direct causes, but in general they depend on a peculiar condition of the system, not clearly understood. Generally speaking, however, they accompany inflammation of the mucous membranes, and especially an unhealthy state of the digestive organs. Erythema appeared in Paris in 1829, in an epidemic form.

Diagnosis.—No other class of cutaneous affections is characterized by that peculiar redness, *disappearing under pressure*, which is diagnostic of the exanthematous diseases. This of itself is sufficient to distinguish it from purpura and ecchymosis. In the negro, the color of the inflamed skin, instead of being red, is even darker than natural. Several papular, vesicular, and bullous eruptions may be complicated with the exanthemata. It was in consequence of the frequency of these complications that Willan placed erysipelas amongst the bullæ. The prognosis and treatment of the exanthematous diseases should be regulated according to the seat and extent of the inflammation, the age and constitution of the patient; and, above all, according to the severity of the accompanying lesion. A mild and simple plan of treatment will, in many cases, be sufficient. In some instances, however, the disease must be attacked with more energetic measures. It is impossible, as may easily be imagined, to lay down any precise line of treatment for a class of diseases which appear under such various forms and degrees of intensity. The period of convalescence is

generally long, during which, several diseases, especially hooping cough, anasarca, and chronic diarrhœa may supervene. Hence the importance of attention to thè general health for a long time after the cutaneous affection has disappeared.

ERYTHEMA.

SYN.—Inflammatory Blush; Tooth Rash; Gum; *Intertrigo; Maculæ Volaticæ; Dartre erythemoide.*

Erythema is a non-contagious exanthematous affection, characterized by slight superficial red patches, irregularly circumscribed, and of variable form and extent. Although it may appear on every part of the body, it is most frequently seen on the face, the chest, and the limbs. It is generally confined to one or other of these regions, but it sometimes spreads over the whole body. Erythema usually follows an acute course, and its duration varies from a week to a fortnight. In a few rare instances it assumes an intermittent, and sometimes even an essentially chronic character. When it accompanies ague, or supervenes during the paroxysms of inflammatory fever, its duration will be longer or shorter, according to that of the diseases with which it coexists.

Symptoms.—Erythema is seldom preceded by febrile symptoms. It appears in the form of patches, of variable extent, and of a light superficial red color, very different from the deep and intense hue of erysipelas. The redness disappears for a moment upon pressure of the finger. There is little or no heat or pain. The spots are most commonly irregular in shape, but are sometimes well defined. They are often limited in extent, and scattered over different parts of the body; and in other cases, on the contrary, they nearly cover an entire limb, half of the chest, or, what is still more rare, a large part of the surface of the body. Generally unattended by any elevation, they are sometimes accompanied with either an indolent or a painful and circumscribed degree of tumefaction, which invests the eruption with a peculiar aspect, and constitutes two distinct varieties of erythema.

One of these varieties (*Erythema papulatum*, Willan) occurs most frequently in females and in young men, on the neck, the chest, the arms, the back of the forearm, and the back of the hand. The patches are small, seldom exceeding the size of a fourpenny-piece; they are irregularly rounded and slightly prominent, like papulæ. The red color soon changes into a violet hue, especially in the centre of the

patches. In the course of thirty-six or forty-eight hours, the tumefaction diminishes, and nothing remains but the red color, which gradually declines, and disappears altogether in the course of a week or two. In other cases, however, the patches remain longer, and are much more prominent. (*Erythema tuberculatum*, Willan.)*

Erythema nodosum occurs most frequently in children, in females, and in young persons of both sexes, of a soft and lymphatic temperament. It generally appears on the extremities, and particularly on the anterior part of the leg. Slight constitutional disturbance, depression, loss of appetite, frequently precede or accompany this eruption. The red patches are of an oval form, slightly raised towards the centre, and their diameter varies from a few lines to an inch. On passing the hand over these patches, they are found to be elevated a little above the level of the skin; the tumefaction gradually increases, and in a few days from their first appearance, small red, painful tumors appear, which seem inclined to suppurate, but they immediately diminish in size; the original red color is replaced by a purplish stain; they soften, and disappear gradually in the course of twelve or fifteen days. If the fingers are passed lightly over the surface of the skin, when the tumors begin to subside, a suspicious sense of fluctuation is readily perceived, and yet there is no pus present.†

* The large, dull red, flattened elevations of this form are sometimes arranged in patches from one to two inches in diameter, forming entire circles or segments of circles, with the centre sound, and not unfrequently appear in those advanced in life, who are suffering from gastric or intestinal derangements, especially in females; and in such cases, might be mistaken at first sight for tubercular syphilis. These patches are sometimes alone, and in other cases, the distinct form will be seen scattered over the face, chest, arms, &c., at the same time. H. D. B.

† *Erythema nodosum* is sometimes found associated with rheumatism, and is doubtless more or less connected with a pathological condition of the system, analogous to that now recognised as characterizing that disease; but we see no reason for supposing any direct relation between the two diseases, as has been recently maintained by Dr. Begbie.—(*Dublin Med. Press*, June, 1850.)
H. D. B.

Chronic Erythema.—Of this there are two forms:—1st. That produced by external irritation, as in those whose occupation exposes them to irritating substances of different kinds, as masons, miners, those exposed to intense heat, also grocers, &c.

2d. That connected with internal causes, and generally symptomatic of some derangement of the digestive organs. The second form may cover large surfaces, as the entire limbs, or may be entirely local. Of the latter variety, one of the most common and most troublesome is *Erythema nasi*, often called *Erysipelas* of the nose, which is characterized by redness of the extremity of the nose, or of the alæ, and frequently of the neighboring parts of the cheek. It appears in both sexes, and is often connected with derangement of the digestive organs, and in females, with menstrual disorders. Some of the follicles may become inflamed, and increase in size, and the disease thus pass into *Acne rosacea*, under which head it is described by some writers. It is also sometimes produced by the habitual

Causes.—Erythema frequently results from the action of different external causes on the surface of the skin. Thus, for example, in children and persons of a full habit of body, it is produced by the constant attrition of two contiguous surfaces. In these cases, it usually occurs beneath the breasts, in the axillæ and groins, and at the upper part of the thighs. (*Intertrigo*. Sauvages.) Under the same circumstances it may appear on the buttocks and on the internal surface of the thighs, from hard riding or walking. It may also result from the action of the sun and from cold, from the contact of acrid or irritating matter, fluor albus, gonorrhœal discharge, urine, and even from fæcal matter. It appears sometimes on the upper lip, resulting from the action of an irritating fluid which is discharged from the nostrils in coryza. Erythema is often merely symptomatic of some other affections; thus, for instance, it frequently supervenes during the periods of dentition, menstruation, and at the climacteric period, and after taking irritating food, balsam copaiba, &c. Idiopathic erythema usually terminates by resolution in the course of a few hours, or in a day or two. Slight desquamation occasionally takes place, and in *E. intertrigo* a sero-purulent exudation of a disagreeable odor is established on the diseased parts. Erythema may assume an intermittent or a periodic form, and it frequently supervenes during the convalescence of some severe disease. When it is symptomatic of an acute affection, it quickly disappears on the cessation of the paroxysms of the disease, without any perceptible desquamation; hence the name *E. fugax*. This is the case when it occurs with intermittent fever; but at other times, it may continue seven or eight days, and occasionally a much longer time, and terminate with slight desquamation. It may occur in cases of anasarca, giving rise to several confluent patches, scattered here and there over a smooth and shining surface. (*E. lævc.*) It precedes and accompanies a great number of eruptive diseases, presenting different forms, as it is associated with different eruptions.

Diagnosis.—Erythema may be confounded, not only with the other exanthemata, but with eruptive disorders of an entirely different nature and order from itself. The following are those from which it is most difficult to be distinguished. 1. *Erysipelas*. Many authors allege that erythema

stooping required by some occupations, and is sometimes connected with a gouty diathesis, a case of which kind is recorded by Dr. R. J. Graves, in the Dublin Journal, November, 1840. H. D. B.

is but a mild form of erysipelas. There are, however, very distinctive characters between these diseases. Erythema can only be mistaken for erysipelas when it is more diffused than usual, and when the patches lose their circumscribed appearance; even then they may be distinguished by the superficial redness of the skin, by the absence of the tumefaction and sharp burning pain which invariably accompany erysipelas, and by its mild progress and favorable termination. Erythema nodosum was supposed to be a variety of *phlegmonous erysipelas.* The circumscribed nature of the tumors of the former, which *invariably* terminates by resolution, and the absence of those severe febrile symptoms which constantly attend the progress of the latter disease, establish a well marked distinction between both these affections. 2. *Roseola.* In this eruption the red stain is also superficial, but it has a peculiar rosy tint, which distinguishes it at once. Erythema nodosum, the only variety that can be confounded with the irregularly-circular patches of roseola, may be distinguished by the difference of the color, which is always more diffused, and by the tumefaction which accompanies it. 3. *Measles and Scarlatina.* These diseases may be distinguished from erythema, the one by its irregularly-shaped semilunar patches, and the other by the raspberry color and large patches which are characteristic of it. Besides, these eruptions are contagious, and are accompanied by a certain train of symptoms peculiar to themselves. 4. Erythema papulatum has been mistaken for *urticaria.* The greater elevation of the patches, the absence of the violet color, the disagreeable smart itching, and the irregular and often fleeting course of the latter, will readily distinguish it from erythema. This variety has also been confounded with *lichen urticatus;* but in the latter, the papulæ are smaller, more rounded, and solid: the color is much paler, and they are always accompanied with pruritus, which is often very severe. 5. *Syphilitic patches* may at first sight be mistaken for those of erythema; but their duration and coppery color, and other venereal symptoms, which are generally present, will indicate their real nature. 6. Erythema has even been confounded with tubercular lepra! Very lately a patient laboring under this frightful disease was sent to the Hospital of St. Louis. There were no tubercles present, and the eruption was mistaken by the former attendant for erythema. The faint red color, and especially the insensibility of the patches, easily distinguished the one from the other. The prognosis of erythema is never unfavorable.

Treatment.—Idiopathic erythema soon disappears on re-

moving the causes which have produced it. Mild lotions, tepid baths, and attention to cleanliness, constitute the whole of the treatment required. When the eruption is produced by the friction of contiguous surfaces, either in infants or adults, these parts should be powdered with some absorbent substance, and they should be prevented, as much as possible, from rubbing together. When erythema is symptomatic of some other disease, the treatment ought to be regulated according to the measures necessary for that affection. The erythematic blush or redness which frequently appears in females at the climacteric period, or when the menses are suppressed, requires bleeding, diluents, regimen, and other antiphlogistic remedies. Erythema nodosum, although the severest form of the disease, seldom requires any special treatment. Baths, mild aperients, and the abstraction of a small quantity of blood, with rest of the affected part, are the only remedial measures required. As this affection appears most frequently in scrofulous and lymphatic individuals, it may often be advantageous to administer a course of tonics after the eruption has disappeared.*

M. Biett has described a very remarkable variety of this disease under the name of *Erythema centrifugum*. It is of very rare occurrence, and appears most frequently in young people, especially in females, whose health is otherwise excellent. It attacks the face chiefly. It generally appears in the form of round red patches, slightly elevated, and about the size of a shilling:† these patches generally begin by a small red spot, slightly papular, which gradually increases in

* In *E. intertrigo*, the parts should be frequently bathed with some emollient lotion, and a weak solution of acetate of lead, or alum, or of the nitrate of silver will often be of service. When the discharge is fœtid, Dr. A. T. Thompson recommends frequent bathing with a lotion of the chloro-sodaic solution, ℥ij or ʒj to ℥v water. Weak creasote ointment may also be used in some cases.

Dr. Ranking says that he has found equal parts of finely-powdered magnesia, or flour, and the nitrate of bismuth, an invaluable application in the intertrigo of children, and also in the sore nipple of nurses, and superficial burns.—(*Half-yearly Abstract of Med. Science, Vol. I.*)

In *E. papulatum* and *E. nodosum*, mild mercurials are often indicated, with laxatives, antacids, and tepid baths, and frequently tonics afterwards, with attention to diet, which should be nourishing, but not stimulating. Among tonics, the sulphate of quina, with mineral acids, is one of the best.

Chronic Erythema must be treated by laxatives and alteratives, mineral acids, and sometimes alkalies, with particular attention to diet, aided by bathing, either the simple warm bath, or the alkaline or sulphur bath. It is usually very obstinate in its resistance to remedies.

The treatment of *E. nasi* must be governed by its causes, so far as these can be ascertained. Local applications may be used of a gently astringent or stimulating character. H. D. B.

† In the original, the size is compared to that of a piece of thirty sous, which corresponds very nearly with that of a Spanish quarter of a dollar. H. D. B.

circumference, and sometimes spreads over the greater part of the face. The edges of the patches are prominent, and the centre, which retains its natural color, is depressed. There is a considerable degree of heat and redness, but no pain or itching, and each patch leaves a slight depression on the skin. The causes of this variety are unknown. It sometimes coexists with dysmenorrhœa; it is an essentially chronic affection, although its appearance would indicate the reverse.

An epidemic variety of this disease appeared in Paris in 1828 and 1829, which has been described under the name of *Acrodynia*, the principal features of which were an erythematous eruption on the hands and feet, accompanied with a thickening and exfoliation of the epidermis. It was preceded, for several weeks, by uneasiness, headache, nausea, dull pains in the limbs, and obstinate diarrhœa. The soles of the feet and the hands then became numb, and the patient experienced a kind of prickling and shooting sensation in those parts, which generally increased towards night. These symptoms were usually accompanied with a perversion or diminution in the sensibility of the affected parts. Sometimes the slightest touch produced the most intense pain; and in other cases, on the contrary, the sensibility of the skin was so torpid that the patients dropped their shoes without perceiving it, and the pavement appeared as soft as if their feet were covered with cotton. In a few instances the sense of touch was almost entirely destroyed, and in others the smoothest surfaces appeared rough and uneven when touched. This morbid condition, which occasionally produced contraction, palsy, and wasting of the limb, often existed without any apparent inflammation; but in general it was either preceded or accompanied with a certain degree of erythema, attended with the following symptoms: the palms of the hands were generally of a crimson red color, which *disappeared for a moment upon pressure with the fingers.* Some of the spots were covered with a hard, thick, yellowish envelope; others again were denuded, and appeared depressed, and possessed a higher degree of sensibility. An inflammatory patch, about half an inch in extent, covered the radial and ulnar edges of the arm. Deep erythematous red patches were often visible on the backs of the hands and about the joints. The feet presented the same appearances, only that their plantar surfaces were generally covered with a thicker and harder envelope, especially about the heels and toes. This envelope terminated abruptly at the edge of the foot on either side, and was circumscribed by a row of pretty

large erythematous patches, of a deep red color. The dorsal aspect was generally free from inflammation. Erythematous patches were at the same time often present in other regions, especially on the scrotum, in the thigh, and in the arm-pits, but without any thickening of the epidermis. In some cases the skin presented a remarkable black color (*pytiriasis nigra*), and in others it was covered with a variety of distinct eruptions. This affection generally appeared without any fever, and often without any derangement of the digestive organs. Obstinate ophthalmia, and œdema of the face and extremities, frequently supervened during the progress of the eruption.

The progress and duration of these *epidemic forms* of erythema, were variable and indefinite. The eruption generally continued for several months, and then disappeared gradually. It sometimes subsided in the course of a few weeks. Persons of all ages, and both sexes, were attacked, but it occurred in men of advanced years, among the poor, more than in any other class of individuals, and among males more than among females. Antiphlogistic remedies are those best adapted for these varieties. Leeches to the hands and feet, outside the inflamed margin, simple baths at first, and subsequently alkaline and vapor baths, and regimen, were all the remedial measures required.

ERYSIPELAS.

Syn.—*Febris erysipelatosa; Rosa Volatica; Ignis sacer;* Rose; St. Anthony's Fire.

Erysipelas is an inflammatory disease of the skin, not contagious, characterized by a deep red color of the parts, with pain and swelling, the latter of which frequently extends to the subtegumentary tissues. It may attack any part of the body, or even spread over the whole cutaneous surface, but appears most frequently on the face and limbs. The erysipelatous inflammation may be confined to the skin, or it may extend to the cellular tissue beneath, which is often deeply involved. We shall describe three varieties of this disease.—*E. verum, E. phlegmonodes, E. gangrænosum*—which are usually preceded for a few days by general symptoms: lassitude, depression, slight or severe shivering fits, hard and quick pulse, epigastric pain, nausea, anorexia, and constipation. About the second or third day after the invasion of these febrile symptoms, the disease begins to appear. It is sometimes, however, later in showing itself.

Symptoms.—1. *Erysipelas verum.* The inflammation does

not extend deeper than the skin in this variety, which is generally attended with the following symptoms:—A degree of pain, sometimes very intense, is perceived by the patient on some part of the skin; the part soon assumes a deep red color, which spreads more or less, and the inflamed surface is much swollen, and its edges are raised. The redness disappears for a moment, on pressure with the finger, which is, however, usually extremely painful.

The eruption is accompanied with a sharp burning heat, and those febrile symptoms already enumerated. The epidermis becomes raised by the effusion of a yellow serous fluid between it and the cutis vera, and bullæ of considerable size are thus frequently produced. The bullæ generally appear about the third or fourth day; they burst within twenty-four or forty-eight hours after their appearance, and pour out a thick, viscid fluid, which terminates in the formation of slight incrustations of various extent and form. The constitutional symptoms usually correspond with the progress of the cutaneous affection; but they are sometimes slight, while the erysipelatous affection is limited in extent, and the reverse. Towards the fifth or sixth day the redness fades into a yellowish tint, the tumefaction subsides, and the epidermis is folded upon itself in wrinkles. At length the morbid color disappears altogether, and the cuticle desquamates over the dried surface. This is the ordinary and most favorable termination of erysipelas verum. When, however, the bullæ are numerous, the skin is covered with small brownish crusts, which may continue for some time. Instead of running its course on the parts where it was developed, erysipelas may spread gradually to different parts of the body, according as it disappears from its primitive seat. In other instances it spreads over a surface of considerable extent, without disappearing from the region where it was first developed, and thus it has, in some rare cases, spread over the whole body. M. Renauldin has related a case of this kind in a woman fifty years of age, who was, however, speedily cured. We have seen a similar case at the Hotel Dieu, in which the erysipelas, originating about a seton in the neck, spread thus over the body and limbs, extending also to the cellular tissue, and giving rise to large purulent formations, and soon proving fatal. There is a peculiar variety of erysipelas (*E. erraticum*), which flies from one part to another, leaving no other traces behind it than that of a slight desquamation. We have seen a case in which the eruption appeared first on the left side of the face, where it pursued the regular course; then broke out on the other side in the same manner; it subsequently

returned to the part first affected, and so on three different times. It is to this form of the disease that the chronic erysipelas of certain authors must doubtless be referred, of which Frank speaks. When it assumes this character, its duration is lengthened, desquamation not taking place until the end of two or three weeks. Erysipelas is sometimes accompanied with œdema, especially when it attacks the lower extremities, in persons of a soft and lymphatic habit. In these cases the redness is pale, and sometimes scarcely visible. The skin is smooth and shining, and retains the impression of the finger for a considerable time. (*E. Œdematodes.*) When œdema accompanies or precedes erysipelas, the termination of the latter is generally favorable; but when it is consecutive of that disease, it is more dangerous; as, for instance, when it supervenes on anasarca, or from the scarifications necessary to give exit to the serous fluid, it may terminate even in gangrene; and, in the event of this taking place, the inflamed skin assumes a livid or bluish color. The epidermis is raised in the form of large irregular phlyctenæ, containing a dirty brownish-colored serum, and death soon ensues, especially in those patients who have been already exhausted by previous disease. When erysipelas results from anasarca, it most frequently occurs on the genital organs, and on the lower extremities.

2. *Erysipelas Phlegmonodes.*—The symptoms of this variety are much more intense than those of the preceding. The inflammation extends much deeper, involving not only the skin, but the whole thickness of the subtegumentary tissues. It may attack any part of the body; but most frequently occurs on the limbs; it is sometimes confined to a particular portion, and at other times, spreads over a whole limb. The intensity of the symptoms, however, varies according to the depth of the inflammation, and the anatomical structure of the parts affected. Even when the cellular tissue is not deeply inflamed, there is a high degree of pain, tumefaction, and fever present. The skin is exceedingly painful on pressure, and slowly resumes its morbid color. It may, in some rare instances, terminate by resolution, about the fifth or sixth day; but in general the pain becomes darting, the redness diminishes, and a number of purulent deposits are formed, which, on being opened, discharge healthy pus, mingled with flakes of gangrenous cellular tissue. When the cellular tissue is deeply inflamed, or when the erysipelatous inflammation spreads over a whole limb, the disease runs its course with great rapidity, and the subcutaneous tissues appear to be inflamed at the same time, or even before the

skin itself. The pain is intense in these cases; the slightest movement makes the patient scream with agony; the skin is red, tender, and in a state of exquisite sensibility. The pulse is quick and hard, and the disease is often accompanied with delirium, insatiable thirst, parched tongue, and copious perspirations. This variety scarcely ever terminates by resolution; it usually ends in suppuration, between the fifth and seventh days, sometimes sooner, the suppuration being accompanied by wandering chills. The redness and heat of the skin subside, but the swelling increases, and the limb has a sort of doughy feel. When the abscesses are opened, they discharge pus and the debris of the subcutaneous tissues, as before mentioned. The disease continues for a considerable time, and the patient, already exhausted by slow fever and suppuration, is run down by colliquative diarrhœa.

Phlegmonous erysipelas may sometimes appear in a still more severe form; as for example, when it occurs on the hands and feet, where the swelling of the parts is prevented by the aponeurotic sheaths. The febrile symptoms are extremely intense in these cases. Violet-colored patches appear on the inflamed surface about the third or fourth day. The skin loses its sensibility, and the patches are covered with phlyctenæ, which extend rapidly. Eschars form, which are gradually detached, and the disease terminates after copious suppuration. Should this severe termination take place while the inflammation is diffused, the whole system becomes involved, symptoms of severe gastro-intestinal disturbance set in, and delirium, drowsiness, wandering dreams, and great change of the features immediately precede death.

3. *Erysipelas Gangrænosum.*—This variety often occurs in those situations where the aponeurotic sheaths prevent the parts from swelling, producing as it were a kind of strangulation. It is also frequently the result of the scarifications necessary to give exit to the serous fluid in cases of anasarca. It chiefly attacks individuals who have been debilitated by long-continued disease, or whose constitutions have been otherwise broken down. Although the local symptoms are often comparatively mild, in general, however, phlyctenæ form rapidly, and the inflammation of the skin soon terminates in gangrene. We have seen a case at the hospital of St. Louis, in which the skin of both breasts of a female, immediately after delivery, was quickly destroyed. The nipple and the areola around it escaped. We have also seen a case of an old man, whose left foot was attacked with phlegmonous erysipelas, which had been at first mistaken for gout. The skin was hot, the thirst great, and the pulse frequent. The

pain of the foot became very severe. In the course of thirty-six hours from its first appearance, the inflamed surface was covered with blackish phlyctenæ, typhoid symptoms supervened, and the patient died on the fourth day. On making a post-mortem examination, the femoral artery was found to be obliterated, and ossified to a considerable extent. In another case, nearly analogous, the patient recovered under the use of charcoal applied externally.

There are certain *local* varieties of erysipelas worthy attention, which we shall now briefly describe.

1. *Erysipelas of the face* is by far the most common of them. It generally commences on the nose, the cheeks, or the eyelids, and gradually spreads over the face. The features are greatly distorted, and the eyelids are intensely swollen. It is accompanied with general symptoms, quick pulse, hot skin, violent headache, sleeplessness, wanderings, and slight delirium, during the night. These symptoms are sometimes very intense, in other cases they are scarcely perceptible. The disease is at its height about the fourth or fifth day, and resolution takes place on the eighth.

2. *Erysipelas of the scalp* is rarely confined to that region; it is frequently a continuation of that of the face. In some instances it is the result of punctures, contusions, minor operations, &c. It is, however, occasionally developed on the scalp, and does not extend beyond that region during its progress. MM. Chomel and Blache have related several cases of this kind. (*Dict. de Med. 2d. edit. art. Erysipelas.*) In this variety the redness is so slight that it may easily be mistaken for some other affection, but it is invariably attended with œdematous swelling and great sensibility of the inflamed skin. It terminates frequently in suppuration, and the subcutaneous cellular tissue often becomes gangrenous without affecting the skin in the slightest. This is explained by the anatomical disposition of the vessels, which, as Dupuytren remarked, ramify in large branches on the internal surface of the *cutis vera*, instead of in the tissue beneath it, as obtains in the extremities. This variety is more frequently attended with cerebral symptoms, which are often very severe, than any of the others.

3. *Erysipelas of the umbilical region* is very frequent in new-born infants at the Foundling and other hospitals. It has been attributed to rough usage of the cord, and to the confined air of these establishments. It sometimes spreads to the hypogastric region, and even to the genital organs, which often become gangrenous; death is then the inevitable result. Although erysipelas appears most frequently in infants around

the umbilicus, it also occurs now and then on the face and limbs. The new-born infant is more liable to this than to any other exanthematous disease. It rarely terminates by resolution or desquamation. Its most frequent terminations are suppuration and gangrene, against which, according to M. Baron, no treatment will be of any avail. M. Baron has observed, that in cases where the disease terminates fatally, it is almost invariably accompanied with peritonitis. (*Dict. de Med. loc. cit.*)

4. *Erysipelas of the limbs* is often very limited. In other cases it spreads over an entire limb, and terminates by resolution, with the exception of a circumscribed spot or two, which generally suppurate.

The most dangerous complications of erysipelas are cerebral and gastro-intestinal inflammation. The erysipelatous inflammation usually disappears suddenly in these cases, and at the same time the symptoms of the organic lesion become more marked. In some instances, however, it does not disappear. Swelling of the parts is a frequent complication of erysipelas of the face.

Erysipelas may terminate in resolution, desquamation, suppuration, gangrene, and death. The first is fortunately the most common. Erysipelas of the face is often preceded by epistaxis.

Autopsy.—A brownish tint replaces the deep red color of the skin after death. The epidermis peels off with much facility. The subtegumentary tissue is often friable, infiltrated with pus and shreddy. M. Ribes has observed the cutaneous veins to be red and inflamed, and to contain pus. M. Cruveilhier and Dr. Copland corroborate this statement.

Causes.—Erysipelas attacks persons of every age and sex, and appears at all seasons, It occurs, however, most frequently during the spring and autumn, and in persons of a fine delicate skin, and sometimes spreads in an epidemic form, especially through hospitals. It is not contagious, although Lorry was unprepared fully to adopt the negative side of the question.* Local irritants, exposure to the sun, punctures,

* Dr. George Gregory considers it both miasmatic and contagious. He says that:—1st. It may commence in a hospital without the suspicion of importation. 2d. That being so generated, from bed to bed, it may spread by contagion. 3d. That the miasma generating erysipelas is identical with that which in lying-in hospitals generates puerperal peritonitis, which in foundling hospitals and workhouse nurseries gives rise to pudendal gangrene and umbilical ulceration, which in any hospital generates hospital gangrene, which in hospitals differently circumstanced is found to occasion a malignant form of cynanche, both mucous and cellular, with otitis, glossitis, an asthenic form of laryngitis, and sometimes the most aggravated type of typhus gravior.—(*Lect. on Eruptive Fevers*, Amer. Edit., New York, 1851, p. 210.)—H. D. B.

a contused wound, a minor operation, &c., often excite this disease. The application of cold may produce erysipelatous inflammation in the form of chilblains. It is, however, in all these cases, often associated with a peculiar state of the constitution, of which we know little. It may also arise from intemperance, from the use of putrid or highly-seasoned food, and from surfeit. It occasionally appears in a *periodic* form, as for example, at the menstrual periods, when the discharge is suppressed, or on the suppression of any other habitual discharge. Strong mental emotions and gastric irritation frequently produce erysipelas. When the disease appears in persons who have been long confined in prisons, hospitals, or in any ill-ventilated places, it is generally the result of chronic derangement of the digestive organs. It often supervenes during inflammation of the serous membranes, or of some of the internal organs; its appearance is then, sometimes, considered salutary. The relation that exists between erysipelas, gout, and rheumatism, in certain constitutions, has been often pointed out by writers on these diseases.

Diagnosis.—The peculiar characters of erysipelas are so well marked that it is difficult to mistake it for any other affection. In cases of erysipelas of the scalp, a careful examination is sometimes necessary, especially when it coexists with some other severe disease, the symptoms of which are likely to attract or draw off the physician's attention.*

Prognosis.—Erysipelas is only dangerous when it is extensively diffused or complicated with inflammation of the brain or of the intestinal canal. When the erratic variety of the disease continues beyond a certain time, danger may also be apprehended. If it supervenes during the progress of anasarca, pleurisy, pneumonia, and gastritis, the prognosis is generally unfavourable. Its sudden disappearance indicates a metastasis to some of the internal or vital organs, and is invariably a bad omen. The prognosis of phlegmonous erysipelas is usually more serious, and becomes the more so in proportion to its extent. Gangrenous erysipelas is always dangerous, especially when accompanied with typhoid symptoms. There are some cases, however, in which the appearance of erysipelas seems to be a salutary turn or crisis of a pre-existing disease; as, for instance, when it occurs in gout, rheumatism, &c.; but it is in some of the chronic and rebellious diseases of the skin, as lupus, and certain old scaly erup-

* The edges of the inflamed spot are as red as its centre, and slightly elevated and festooned, the skin a line beyond this edge appearing to be normal; while a line within it is as inflamed as in the centre of the affected part. This *festooned edge*, M. Velpeau considers as the pathognomonic sign of erysipelas.—H. D. B.

tions, that the beneficial results of its development, whether natural or excited, are most marked.

Treatment.—When erysipelas is not complicated with any disease, or when it is confined within a small compass, very simple measures will suffice. Regimen, diluents, quiet, and the horizontal position, are all that is required. Goulard's lotion is very beneficial in the variety called *chilblains*. When the disease spreads, and is accompanied with general symptoms, we must have recourse to bleeding, especially if the patient is young and plethoric, and a general reaction of the system has taken place. Venesection is also highly necessary during the inflammatory fever which precedes the development of the eruption. Bleeding from the arm is more efficacious than from the foot, as a larger quantity of blood can be obtained in a given time; but when the pulse falls, and at the same time the eruption preserves its intense character, local bleeding is preferable when the face or the scalp is the part affected. Both local and general bleeding may often be employed together with advantage; but the inflamed surfaces should always be carefully avoided in opening the veins or applying leeches. To these measures may be added acidulated drinks, laxatives, and regimen. Erysipelas of the head always requires the most energetic and decided measures. Phlebotomy ought to be repeated according to the persistence and urgency of the symptoms. There is, however, an exception to this rule: for example, when the disease appears in persons of weak and broken-down constitutions, no matter how severe the symptoms may be, great caution is necessary in extracting blood from the system. Emetics are often very useful, especially in old persons, and where the digestive organs are free from inflammation, and the tongue is coated, with a bitter taste in the mouth, &c. Purgatives sometimes act very beneficially on the intestinal canal by derivation; laxatives, or mild purgatives, will generally suffice.*

* In erysipelas, as it has prevailed of late years in this country, and especially in cities, the lancet is rarely called for; and, in some cases, supporting and even stimulating means are required from the commencement. This is especially true of the disease as seen in hospitals and other public institutions. In rural districts, bloodletting is more frequently beneficial, but even here has often to be soon followed by supporting measures. The nature of the particular epidemic prevailing at the time must be carefully studied.

Mr. G. Hamilton Bell, of Edinburgh, has lately recommended the internal use of the muriated tincture of iron in this disease. He has used it in every case of erysipelas which he has treated for upwards of a quarter of a century without a single instance of failure, and says that it not only removes the disease, but generally renders the patient more healthy and robust than before the attack. He believes the capillaries in erysipelas to be in an atonic state. After free action on the bowels, he gives fifteen drops of this article in water every two hours, in mild

Local applications are seldom useful in the treatment of erysipelas. Cold lotions should in particular be avoided; and also poultices. Blisters may be employed advantageously in fixing to one spot the erratic variety of the disease, or in reproducing the eruption after it has suddenly disappeared. Dr. Higginbottom has cured erysipelas of the face, by touching a small surface here and there with the nitrate of silver. This remedy has also been employed to circumscribe the disease, and prevent it from spreading. MM. Biett and Velpeau have adopted the same practice with success. The application of mercurial ointment to the erysipelatous surface has been much recommended by writers in this and in other countries. A very strong mercurial ointment should always be employed, otherwise it will be inefficacious. It ought to be rubbed in gently with the hand every two hours, and for eight or ten minutes at a time, provided that the friction does not excite much pain. The parts are then to be covered with dry linen. Lard has been used by MM. Velpeau and Lisfranc with some success in cases of slight inflammation of the skin; but mercurial ointment has a peculiar antiphlogistic action in these cases which simple lard has not. When lard is used, it should be as fresh as possible.

A layer of larded cotton laid on a piece of thin oiled silk, and very loosely bound on the affected surface, with a fine compress over it, is a very simple, and often an efficacious topical application.* In phlegmonous erysipelas, both local and general bleeding should be resorted to the moment the disease appears. Emollient local baths may also be employed and continued for some time, as much with the view of encouraging the bleeding as of diminishing the inflammation.

If these measures fail, and the disease still advances, we

cases, until the disease is completely removed. In more severe cases he gives twenty-five drops every two hours, night and day, however high the fever and delirium. The only local applications he finds necessary are hair-powder and cotton wadding. The bowels require attention throughout the treatment.

His brother, Dr. Charles Bell, unhesitatingly expresses the same favorable opinion respecting it, after an experience of many years in its use, and has derived equal benefit from it in infantile erysipelas, and in the form consequent upon external injury. He gives it to young infants in doses of two drops, every two hours, in a teaspoonful of sugared water. Both writers give cases in illustration —(*Monthly Jour. Med. Science*, June, 1851.)—H. D. B.

* M. Velpeau speaks very favorably of the sulphate of iron as a topical remedy in this disease, either in solution or as an ointment—the former of the strength of ℈j to ℥vj water, and the latter 3iiss to ℈j—3x lard, to be applied every second or third hour. Internal remedies must also be used, if indicated by the symptoms. The following lotion, extensively used in the New York hospital, is found both agreeable to the patients, and useful in allaying the local inflammation. ℞ liq. ammon. acet. ℥ iij; spir. vin. ℥ j; aqu. fontan. ℥ xij. m. f. lot.—H. D. B.

must have recourse to free incisions of the inflamed parts down to the sheaths, with the view of relieving the painful tension of the aponeuroses, of giving exit to the confined matter, and of circumscribing the gangrene. Compression by means of a bandage is not only a useless but even a dangerous remedy in phlegmonous erysipelas. It may produce gangrene. In E. œdematodes of the legs, however, it is often very useful. Tonics may be employed with advantage in the early stages of this variety. Sulphur fumigations have been recommended in certain varieties of erysipelas. In gangrenous erysipelas we ought early to have recourse to tonics, some of which should even be applied to the diseased surface. Acidulated drinks, quinine, compresses wet with aromatic decoctions; and at a later period quinine powders, camphor, and a solution of chloride of lime, in the proportion of a drachm to a quart of water, as topical applications, are indispensably necessary. M. Biett has employed charcoal poultices in gangrenous erysipelas with great success, and we have witnessed their very favorable action in some cases.

ROSEOLA.

SYN.—*Efflorescentia erysipelatosa; Rosalia; Rosacia; Rubeola spuria;* Rash; Rose rash; Anomalous rosy eruption.

Roseola is a mild, transient, non-contagious, exanthematous eruption, characterized by deep rose-colored patches of various size and form, without elevation, and generally preceded and accompanied by febrile symptoms. It may attack the whole surface of the body at once, or, as often happens, be confined to certain regions, as the trunk, the limbs, &c. It is always an acute affection, and its duration varies in general from twenty-four hours to a week.

SYMPTOMS.—1. *Roseola infantilis* occurs in young infants whose stomach and bowels are out of order, or during dentition. It appears in the form of an eruption of numerous, deep, rosy-red patches of a nearly circular shape, and from a fourth to a half of an inch in diameter. They are closely crowded together, yet perfectly distinct, and disappear in the course of twenty-four or thirty-six hours. In some instances they alternately vanish and reappear for several days.

2. *Roseola æstiva* is the most severe form of this eruption. It is usually preceded by pretty smart febrile symptoms. When it attacks children, slight delirium and even convulsions often supervene. The eruption usually appears between the third and seventh days on the face and neck,

whence it spreads, in the space of twenty-four or forty-eight hours, over the rest of the body. The spots are of a deep red color, more irregular in shape than those of measles, and their original color soon passes into a bright rosy hue. There is also present a considerable degree of itching and pain, and often difficulty in swallowing. The progress of this affection is very irregular; there is sometimes entire absence of febrile symptoms. It lasts about three or four days, and then disappears without any evident desquamation; but it sometimes disappears for a time, returns after a short interval, and then vanishes altogether. It sometimes appears epidemically during hot summers. Children and females appear to be most subject to it.

3. *Roseola autumnalis* appears during the autumn in children; the patches are larger than those of the preceding variety; they are seated on the upper extremities, and there is scarcely any fever.

4. *Roseola annulata* appears in the form of distinct rosy rings, in the centre of which the skin retains its natural color. The rings are at first small, but gradually increase, and two or three may frequently be seen encircling each other. It is principally observed upon the abdomen and lumbar regions, on the buttocks and along the thighs. The duration of this variety is, when accompanied by fever, short, but it frequently assumes a chronic form, when it is generally complicated with some derangement of the digestive organs. We have seen two cases in which it coexisted with chronic pericarditis.

Causes.—Roseola appears at all ages, and in both sexes; but occurs more frequently in children and in females, and in summer and autumn, than at other seasons. The same individual may have repeated attacks of it. It sometimes appears in an epidemic form, especially in very warm seasons. It may precede the eruption of small-pox, both natural and inoculated, and appears on the ninth or tenth day of the vaccination of some children. Dentition, cold drinks when the body is heated, severe exercise, and gastro-intestinal irritation in children, are frequent causes of this affection.

Diagnosis.—Roseola has frequently been confounded with measles and scarlatina. The spots of roseola are nearly circular, and are always circumscribed; they are of a deep rose-color, larger than those of measles, and smaller than those of scarlatina.* The patches of measles are small, irregularly

* In the edition of 1847 the patches are said to be larger than those of scarlatina, without any mention of their size compared with those of measles.—H. D. B.

semilunar, and of a bright red color; those of scarlatina are large and diffused, and of a raspberry tint. Both these diseases are contagious, and their symptoms are peculiar to themselves. The most experienced physician, however, may mistake them when they first begin to appear. Roseola annulata is distinguished from herpes iris by the absence of vesicles, and the large size of its rings. Roseola is always a mild affection.

Treatment.—Roseola does not require any particular treatment. Rest and antiphlogistic regimen are all that is necessary. When it is symptomatic of another disease, it is towards the latter that the attention should be chiefly directed. No treatment is required when it appears after vaccination.*

MEASLES.

SYN.—*Rubeola; Morbilli; Febris morbillosa.*

Measles is a contagious exanthematous disease accompanied from the beginning with coryza, lachrymation, cough, and fever. It is characterized externally by small red spots, slightly elevated and distinct at first, but soon becoming confluent, assuming an irregular semilunar form, and leaving small intervals between them where the skin is perfectly sound.

The progress of this disease is always acute; eight or ten days is about the extent of its duration; but some few of the symptoms frequently continue for a longer period. The eruption itself does not last longer than three or four days.

Symptoms.—The invasion of measles is indicated in most cases by a state of general languor of the system, lassitude, especially in the lower extremities, rigors, followed by heat of skin, bleeding from the nose, and vomiting. These symptoms invariably precede the appearance of the disease for some days, and are then followed by the phenomena peculiar to measles—frequent pulse, heat of skin, sneezing, coryza, flow of tears, discharge from the nose of clear mucus, frequent dry cough, slight pain, thirst, anorexia, nausea, white and moist tongue, constipation, red and scanty urine, headache, drowsiness, and sometimes convulsions when infants are attacked.

These symptoms are developed within the first forty-eight

* The evident connexion in most cases between roseola and gastric and intestinal disorder, leads to the necessity for means for the removal of this. When it lingers, or has a tendency to frequent returns, tonics, tepid baths, and a nourishing diet, with laxatives, will often be found necessary.—H. D. B.

hours; their intensity, as also that of the fever, increases to the third or fourth day; when they are succeeded by intense heat of skin, perspirations, great sensibility of the conjunctivæ and eyelids, coryza, hoarseness, harassing cough, dyspnœa, redness of the tongue, and occasionally vomiting and slight delirium. At this period, the palate and uvula are covered with small red points, which soon become confluent.

About the fourth or fifth day, small, circular, red spots, slightly elevated like papulæ, appear on the forehead, chin, nose and cheeks. Soon after, the neck, chest, body, and limbs, are covered successively with a similar eruption. The spots gradually increase in size; they become slightly prominent, and are not unlike flea-bites in appearance. Sometimes a small vesicle may be seen in their centre. They now increase in number, and uniting together, form patches of an irregular, semilunar appearance, leaving spaces between them in which the skin preserves its natural color. In some cases, and especially about the hands and face, a sensation of roughness is given to the finger when passed over the eruption. The redness of the spots in general attains its greatest intensity about twenty-four hours after their appearance, and the eruption itself usually terminates in thirty-six hours from that period. About this time the face is greatly swollen, and in some instances the tumefaction of the eyelids is so great as to impede vision. On the sixth day, the redness begins to subside on the face, and increases on other parts of the body. About the seventh day, the eruption begins to disappear altogether, and on the ninth, slight yellow patches indicate the places which it occupied. The disappearance of the disease, which follows the same order as that of its development, is succeeded by desquamation of the cuticle, generally accompanied by a smart itching. This desquamation, however, is never so great as that which succeeds scarlatina. The heat, thirst, coryza, cough, and other symptoms, instead of subsiding as the eruption advances, are considerably increased; the expectoration is abundant and thick; the sputa have a peculiar character, being round and nummulated, very analogous to the sputa of patients with phthisis; but the pulse becomes slower. These phenomena, however, generally cease as soon as the eruption disappears. The cough continues longer than any of the other symptoms mentioned, hæmorrhage from the nose sometimes supervenes at the termination of the disease, and frequently a slight diarrhœa ensues, which appears to hasten the convalescence.

This is the natural course of measles; but in some cases the eruption is scarcely apparent, whilst in others it is unna-

turally developed. Sometimes the red color of the patches is very intense, while, on the contrary, it is scarcely visible in other instances.

Measles may be complicated with a variety of diseases. It may coexist with variola in the same individual, but the progress of one of these eruptions is, under such circumstances, generally arrested by that of the other. Hunter mentions some curious cases bearing upon this point. It is rarely accompanied by petechiæ; but as M. Biett has frequently observed, the patches may assume the color and form of *purpura simplex*, and will no longer disappear under pressure of the finger. The complications which especially demand our attention are the cerebral affections which frequently terminate in effusion of serum into the ventricles, and pulmonary and gastro-intestinal inflammation. It is in these instances that those symptoms called ataxic and adynamic are developed.

Croup is a very dangerous complication of measles; but, fortunately, not a very common one. In short, a variety of eruptions of the vesicular, bullous, and pustular classes, may accompany measles.

Independent of the complications now mentioned, several other diseases may arise during convalescence; as for example, we not unfrequently meet with obstinate chronic ophthalmia, inflammation of the mucous membrane of the air passages, otitis, accompanied with deafness, and chronic inflammation of the lymphatic glands and vessels. In individuals predisposed to phthisis, the development of tubercles appears to be favored by the continuance of the catarrh consequent upon measles. The convalescence of this affection may also be retarded, as in cases of scarlatina, by the occurrence of acute dropsy; a contingency, however, much more frequently occurring in the latter than in the former disease.

In the majority of cases, measles follows a pretty regular course, and terminates favorably; but sometimes the patients sink, and then death is to be attributed to one of the complications of the disease, as in those fatal terminations signs of inflammation, or of organic congestion, are invariably discovered on making a post mortem examination, most frequently of the brain, the lungs, or the stomach.

Causes.—It is pretty generally admitted that the measles is the result of an unknown morbid poison, which may be transmitted by contact or by infection, and generally occurs but once, in the same individual, during life.

There are, however, some well attested cases on record of relapse of measles. The arguments put forth by writers,

with the view to prove that inoculation of the blood of a patient affected with measles into a healthy individual may transmit that disease, are by no means conclusive.*

Measles is not indigenous to any country; it almost invariably prevails in an epidemic form. In some of these epidemics, and in certain cases, coryza and irritation of the pulmonary mucous membrane are the only symptoms developed; and again, in a few rare instances, measles shows itself without any of these phenomena. In the latter cases, however, the patients are not protected from a second attack. No age is exempt from the disease, but young subjects are those most frequently attacked. Infants have been born with the disease. It occurs, however, more frequently after than before the first dentition. It prevails more during the winter, and particularly at the beginning of spring, than at any other season.

The eruption generally appears between the tenth and fourteenth day from the period of infection.

Diagnosis.—The characters and progress of the disease, and the nature of its symptoms, are always sufficient to distinguish measles from *scarlatina*. In measles, the symptoms of invasion precede the eruption three or four days; the patches are smaller, of a bright red color, irregularly semilunar, and the skin between them is perfectly healthy. In scarlatina, the eruption appears more suddenly, the patches are larger, irregular, and of a raspberry tint. The eruption of scarlatina never disappears in the uniform manner of that of measles; and small irregular patches are observed about the end of the fifth day, which may easily be confounded with those of the latter disease. There are, indeed, some cases in which the diagnosis is really very difficult, as, for example, in those instances where large patches of an uniform red color cover different parts of the body, and where the symptoms of irritation of the mucous membranes resemble those commonly attendant upon scarlatina. In such cases the prevailing epidemic should be taken into consideration, and the leading symptoms of the disease; the fact of the patient having already had the measles should not deter the physician from making a careful examination, for it is ascertained that the same individual may be affected twice with this eruption.†

* Measles has been communicated by inoculation with the blood in several well authenticated instances. In Hungary, in 1842, Dr. Ratona also inoculated 1122 persons with a drop of fluid from a vesicle, or from the tears of patients, and failed in only seven per cent. of those on whom it was tried.—*Brit. & For. Med. Review*, July, 1845, p. 211. H. D. B.

† To the above diagnostic marks between measles and scarlatina, we may add:

With regard to *roseola*, the size and deep red color of the patches, their rounded form, and its non-contagious character, readily distinguish it at a certain period; but when the ordinary symptoms of measles do not appear at the commencement, it may be mistaken for that eruption. In short, the different cutaneous affections with which measles may be complicated, have their own peculiar characters; but it is necessary to remark, that their progress is sometimes very insidious, and requires considerable attention.

Prognosis.—Measles is not in general a severe disease, but may become so in many cases. It is particularly dangerous when attacking pregnant women, or those lately confined and also individuals exhausted by previous disease, and in feeble children, of lymphatic temperament, who are predisposed to bronchial irritation. In forming the prognosis, account should be taken of the general character of the form of the disease then prevailing, of the degree of intensity of the accompanying lesions, and the nature of the organs affected.

The appearance of petechiæ, a premature eruption, its sudden disappearance, followed by a considerable degree of fever and oppression, are unfavorable signs.

Treatment.—The ordinary treatment of measles consists in regimen, repose, a moderately cool temperature, diluents and mucilaginous drinks, the inhalation of some emollient vapor, and care to protect the eyes from too strong light.

Emetics will be found very efficacious, if administered at the commencement, with the view of relieving the sickness of the stomach, but especially with the view of encouraging the eruption. In some instances, the administration of a few grains of ipecacuanha will bring out the eruption more rapidly and more freely.

When measles is complicated with croup, emetics will be indispensable. The constipation which continues during the first day or two, produces no inconvenience; and if it persists when the disease is further advanced, it may be removed by simple injections.

If the eruption does not come out freely, or if it suddenly disappears, diaphoretics should be administered immediately. The patient is to be put into a warm bath, containing mustard, or, still better, into a vapor bath, if it can be conveniently done. But when it is very slow in appearing, and the fever

the difference in the periods of incubation, that of measles being two weeks, that of scarlet fever one week; the difference in the accompanying symptoms of each, and also in the secondary affections peculiar to each.

Dr. Gregory says that the color of measles is brightest on the parts exposed, and in scarlet fever brightest on the parts covered. H. D. B.

is at the same time increasing, we have reason to fear the development of some internal disease; and in the event of this, it will be necessary to take decided preventive measures at once. We shall now pass in review the therapeutic measures which will best contribute to this end.

General and local bloodletting first command our attention. In having recourse to these remedies, it will be necessary to distinguish clearly the symptoms which naturally accompany the disease, from those which depend upon internal inflammation, involving, to a certain extent, the life of the patient. As, for instance, during the eruption of measles, there is frequently a good deal of functional disturbance, thoracic pain, severe cough, prostration, and on stethoscopic examination, a sub-crepitant râle, of more or less intensity, is frequently discovered; nevertheless, these alarming symptoms almost invariably disappear spontaneously, as the disease subsides. But if they continue, recourse must be had, and that promptly, to general and local bloodletting, and the quantity of blood to be drawn must be proportioned to the strength of the patient and the urgency of the symptoms.

When evident signs of pneumonia are present before the appearance of the eruption, or where there are symptoms of gastro-intestinal inflammation, or coma, stertorous breathing, accompanied with a high degree of fever, the disease should not be left to nature; blood should be drawn freely. In young children, the application of leeches to the temples, behind the ears, at the epigastrium, or anus, may be substituted with advantage for phlebotomy. In adults and young subjects, it is frequently useful to employ, at the same time, general and local bleeding. It often happens, when blood is drawn under these circumstances, that the eruption appears immediately, and the symptoms become less urgent. The period at which bleeding should be resorted to is highly important; the remedy will be efficacious, in proportion as it is employed early, and at the commencement of the accompanying inflammation. When the different vital organs have been already for some time the seat of congestion, instead of being useful, it may even hasten a fatal termination. In short, the employment of bloodletting is a point of the highest importance; it is to be regarded as a remedy which has for its object the prevention or subjugation of these inflammatory diseases which, instead of averting the measles, invariably aggravate that disease.

Purgatives, perhaps, have been too much extolled in the treatment of measles. The gastro-intestinal irritation with which it is so frequently complicated, indicates the necessity

of being cautious in employing these remedies. They may, however, produce considerable beneficial effect in cases where meningitis, pneumonia, sore throat, and croup occur; they should be employed conjointly with bloodletting. The purgatives which we have found most efficacious are manna, senna, calomel, and castor-oil.

About the ninth or tenth day, when the diarrhœa generally commences, gentle cathartics and laxatives may be employed with advantage; but when the disease is subsiding, they are particularly required.

Blisters and sinapisms should be employed with reserve; they are sometimes beneficial in reproducing the eruption or hastening its progress.

The application of cold water, when the skin is dry and hot, has been much praised by English practitioners. When speaking of the treatment of scarlatina we shall recur to this remedy, which is not, perhaps, so applicable to measles, in consequence of the frequency of its complication with pulmonary inflammation, a circumstance already observed by M. Guersent.

Tonics, such as wine, bark, quinine, camphor, are only indicated when the pulse is small and feeble, the skin cold, and the eruption pale or livid. They should never be administered in cases where the skin is dry and burning, notwithstanding the appearance of adynamic symptoms.

During convalescence tepid baths may be employed, but great precaution is necessary to guard against cold or chills. If the cough continues, laxatives, opiates, a blister to the chest, or on the inside of each arm, should be prescribed. Sometimes slight febrile symptoms supervene, and hygienic measures become necessary. In conclusion, in cases of obstinate diarrhœa, opiates, emollients, strict regimen, a blister in each groin, or in the ileo-cœcal region, are the remedial measures most likely to prove beneficial. The prophylactic treatment consists solely in isolation. Since it is not positively ascertained when the contagion ceases, it is prudent to continue this precautionary measure until after the twentieth day.

SCARLATINA.

Syn.—*Febris scarlatina; Angina erysipelatosa; Rosalia; Purpurea scarlatina; Febris anginosa; Morbilli confluentes.*

Scarlatina is another contagious exanthematous disease, appearing in the form of minute red spots, which soon run

together, and form broad, irregularly-shaped patches, of a raspberry color, which in their turn become united, and spread over a large extent of surface, sometimes over the whole body. The eruption appears between the third and sixth day after exposure to contagion, and is preceded and accompanied by general febrile symptoms, and irritation of the mucous membrane of the mouth, larynx, &c.

Symptoms.—Scarlatina presents great variety in the character of its symptoms, being sometimes a very slight disease, and at other times a severe one; and often accompanied by serious complications, which place it sometimes beyond the reach of even the most appropriate treatment.

1. *Scarlatina simplex* generally sets in suddenly, towards evening, with symptoms of extreme depression, rigors, nausea, vomiting, and pains in the back, loins, and limbs. The pulse is greatly accelerated, beating from 120 to 140 pulsations in a minute, and respiration is hurried and irregular. The body is hot, whilst the feet are cold; and in some rare cases convulsions supervene about this period. The following day, sometimes earlier, the eruption appears; first, on the neck and face, whence it spreads over the whole body in the space of twenty-four hours.

The eruption consists of a great number of small red points, which are so close together that the entire surface of the skin is of a bright red color, and feels rough to the touch. It is also accompanied with intense heat, and a distressing burning sensation; and the parts upon which the body has been lying are of a bright scarlet or raspberry color. The color is equally vivid in the bends of the joints. The tongue, the pharynx, the soft palate, the internal surfaces of the eyelids, the nostrils, and the cheeks, present the same brilliant hue, and deglutition is painful and difficult. The tongue is often red only at its apex and edges, whilst the middle and back part are covered with a whitish fur, through which the inflamed papillæ project, giving the part the appearance of a ripe strawberry. The eruption is usually accompanied by more or less excitement; sometimes there is delirium and coma. The febrile symptoms sometimes subside on the appearance of the eruption, but they commonly continue, as well as the thirst, heat, nausea, constipation, and difficulty in swallowing. The raspberry tint is always most vivid towards the evening, especially about the third or fourth day. It begins to subside about the fifth, and generally disappears on the seventh, at which period desquamation commences. The foregoing symptoms disappear with the eruption. The redness of the tongue, however, continues, and copious

perspirations or diarrhœa often supervene. The urine frequently deposits an abundant thick sediment. The process of desquamation, which may either be of the furfuraceous or lamellated kind, is invariably attended with an insupportable pruritus, and is often prolonged even for thirty or forty days, and may be renewed several times. This is the mildest form of scarlatina, the duration of which is from eight to ten days.

2. *Scarlatina anginosa* derives its name from the much more severe affection of the throat which accompanies it. All the precursory symptoms are much more aggravated in this variety than in scarlatina simplex. The patient complains from the onset of stiffness of the muscles of the neck and lower jaw; the mucous membrane of the pharynx is of a bright red color. After the second day the tonsils become greatly swollen, the voice is hoarse, deglutition is painful and difficult, and sometimes the liquids attempted to be swallowed are returned by the nostrils. Respiration is painful, and there is a sensation of suffocating constriction about the throat. The pulse is also very frequent, the skin very hot, and there is restlessness, headache, coma, slight delirium, epistaxis, nausea, and sometimes vomiting.

The eruption presents nearly the same appearance as in scarlatina simplex; but it does not always appear on the second day, and often not until the third, nor does it spread so extensively. It appears in the form of broad scarlet patches, irregularly shaped, and scattered over different regions of the body, especially on those parts on which the body rests. The pillars of the soft palate, the tonsils, and pharynx, are in many cases covered with thick mucus, or with flocculi of greyish-white pultaceous matter, which sometimes remain adherent for several days, and in other cases are renewed every twenty-four hours. These pultaceous exudations are sometimes rendered dark-colored by extravasated blood; the tongue often cracks, as well as the lips, which are covered with black crusts formed by dried blood. The tonsils, uvula, and posterior fauces are also occasionally slightly ulcerated. The eruption frequently disappears in the course of twenty-four hours, and reappears on other parts of the body at different intervals. The symptoms are not more severe in these cases, but their duration is longer, and desquamation is less regularly accomplished. The affection of the throat is the most obstinate symptom in this variety of the disease.

3. *Scarlatina maligna* is a still more intense form of the disease than either of the foregoing, from which it differs merely in degree, and scarlatina, which is mild at first, may

early assume a malignant character. The symptoms at first are the same as those already enumerated, but become greatly aggravated on the first or second day. The eruption usually appears within twenty-four hours, but is often later in showing itself. There is great depression, excessive thirst, dryness, and burning heat of skin, anxiety, oppression, and vomiting; the pulse is full and frequent. The symptoms become still more severe in the course of a few hours; delirium supervenes, the tongue becomes dry, and the pulse feeble, the eyes injected, the face of a dark crimson color, and the breath fœtid, and the tonsils and parts about them are covered with a blackish exudation. When infants are attacked, typhoid symptoms supervene. There is coma, and stertorous breathing, tumefaction about the neck, and the head is bent backwards on the body, and the pulse very weak and very rapid. To these sometimes succeed hæmorrhage from the nose and bowels, an eruption of petechiæ, cold extremities, and death. All these symptoms follow in rapid succession, and death often occurs without the disappearance or even the fading of the eruption, and the burning heat of the skin even persists to the moment of dissolution. This variety may terminate in death in a few hours, or not until the end of the third or fourth day, or even later. When the disease does not thus terminate, gastro-intestinal inflammation supervenes, and extensive suppuration takes place in the numerous eschars which form on different parts of the body.

Scarlatina may be complicated with a variety of inflammatory cutaneous diseases. Miliaria, for example, is a very frequent complication. The eruption appears on the chest, neck, shoulders, temples, and scalp, and quickly vanishes again, either by absorption, or by the discharge of the fluid of the vesicles. It is rarely complicated with erysipelas, measles, or variola. Inflammation of the mouth, posterior nares, and pharynx, are the most dangerous, and, unfortunately, the most frequent complications of S. anginosa and S. maligna. The greater part of the epidemics of gangrenous anginas described by Fothergill, Huxham, &c., were probably instances of diphtheritis; and it is a rational supposition that before the labors of M. Bretonneau, many cases of this disease were regarded as gangrenous angina. Croup is an exceedingly rare complication; M. Biett and M. Bretonneau have never seen it, and M. Guersent has seen but a single case of the kind. Inflammation of the brain, thoracic viscera, or of the mucous membrane of the stomach and bowels, almost always supervenes in the intense forms of the disease. All the large viscera are often affected simultaneously, in

which case the disease soon proves fatal. The partial gangrene which occurs in some cases indicates a state of great exhaustion in the circulation. Amongst the other sequelæ of scarlatina, we may mention abscesses in the tonsils, bronchitis, ophthalmia, otitis, and deafness; inflammation of the parotid and testes in adults, or of the submaxillary and inguinal glands in children. But those which are most to be feared during the convalescence of this disease, are acute anasarca, and effusion into the different splanchnic cavities. Anasarca usually appears about eight or ten days after the eruption has subsided, and may be partial or general. It occurs much more frequently, and is much more severe, in children than in adults, and oftener in the winter than in the summer season. The precursory symptoms are depression of the spirits, languor, sleeplessness, and want of appetite, with frequent and hard pulse, hot skin, and scanty and turbid urine. The œdema commences at the eyelids, thence it spreads to the face, the lower extremities, and sometimes over the whole body. It continues for eight or ten days, and when confined to the subcutaneous cellular tissue, is not dangerous. It may be complicated with pain in the bowels and diarrhœa. In some rare cases, rapid effusion into the serous cavities takes place, and death soon follows.

Autopsy.—External appearances. In general the skin is studded with large livid red patches, which do not extend deeper than the epidermis. In other instances there is not the slightest trace of any eruption; but in all cases putrefaction takes places rapidly in the tegumentary tissues.

Internal appearances.—The mouth, the pharynx, the larynx, and even the trachea, are red, and covered with a grayish white pultaceous matter. The substance of the brain, and the vessels which ramify on it, are often highly injected. The lungs are sometimes sound, sometimes engorged with blood, and friable; and in other instances the parenchymatous tissue is dense, of a bright red color, and is torn with difficulty. The mucous membranes of the stomach and bowels generally present a slight red color, and occasionally a peculiar violet hue; but in a great many cases they are free from every morbid alteration, even when diarrhœa has been a prominent symptom.

Causes.—Scarlatina is the result of an unknown contagious principle, and occurs more frequently in children and young persons than in any other class of individuals. It is a disease of frequent occurrence at the Children's Hospital, Paris, whilst it rarely appears in the Foundling Hospital. Its appearance is confined to no particular season, but it sometimes prevails

in an epidemic form in autumn, when there is much rain, succeeded by great heat. All damp situations and places where there is not a free circulation of air, predispose to this disease. It appears to be most contagious during the period of desquamation. It never attacks the same individual a second time. Willan never met with an instance of its return in two thousand cases.* In some epidemics, the constitutional symptoms occasionally occur without the eruption, or the eruption without the constitutional symptoms.

Diagnosis.—Scarlatina cannot be confounded with measles, if we recollect that in the former the eruption appears ordinarily in the space of twenty-four hours after the first symptoms. The raspberry color of the eruption, the sore-throat, and the peculiar character of the phenomena which accompany scarlatina, will readily distinguish it from that disease. Roseola is sometimes attended with decided sore throat; but the patches are much broader, and the color is more vivid in scarlatina. Besides, the duration of the former is short and irregular, whilst that of the latter is prolonged, often for a considerable time.

Prognosis.—Scarlatina simplex is not a dangerous disease. The prognosis of the other varieties is much more unfavorable, especially when they occur in pregnant women, or in those newly confined, and when they are accompanied with other severe diseases.

Treatment.—The treatment of the mild forms of scarlatina may be confined to dietetic and slight antiphlogistic measures. A moderately cool temperature, refreshing mucilaginous drinks, acidulated with lemon juice or hydrochloric or any other acid, and slightly detergent emollient gargles, are the only remedies required. The constipation which always exists at the commencement, should be obviated by simple injections or laxatives. It is sometimes necessary to prescribe emetics at an early period; however, in general, they produce gastric irritation. S. anginosa and S. maligna require more energetic measures than the foregoing, espcially when complicated with organic disease. Bloodletting may be necessary under these circumstances. The repeated application of leeches to the neck, especially when the cervical and submaxillary glands are much swollen, and when the pain is intense, is attended with the most beneficial results. Leeches to the epigastrium are also serviceable in those cases which are accompanied with obstinate vomiting and violent pain of that

* Second attacks of the disease do occur, though probably much less frequently than is generally supposed. H. D. B.

region. Venesection may be advantageously employed when the disease assumes a severe character in strong and vigorous persons. In this case, free bloodletting at the beginning will diminish the intensity of the symptoms. In the early stage of S. maligna, it will prevent, to a certain degree, the organic congestion likely to occur in that variety; but at a more advanced period of the disease it will be useless, and even injurious. Leeches may be applied to the neck, or over the mastoid processes, if symptoms of cerebral congestion occur, and in that case must be applied early.

When scarlatina is accompanied with inflammation of any vital organ, early and copious bleeding is indispensable. In malignant sore throat, acidulated and alum gargles are very beneficial; but in angina membranacea it is necessary to endeavor at once to modify the inflammation, by touching the parts with hydrochloric acid, or with nitrate of silver. M. Biett was in the habit of using equal parts of honey and lemon-juice with much success. A moment should not be lost in having recourse to prompt and decisive measures in the severer forms of this disease. Laxatives and purgatives, conjoined with bloodletting, should be freely employed when there are symptoms of cerebral or pulmonary congestion present. Their use is also indicated when the inflammation of the throat is intense. The physician should not be guided too much by the appearance of the tongue. The scarlet red color of that organ is but a symptom of the disease. If there is much gastric irritation present, injections should be administered.*

Emetics, generally speaking, are only indicated when the pharynx becomes obstructed with pultaceous matter, which occurs chiefly in children. Tepid baths are very beneficial at the decline of the eruption, or when it has suddenly disappeared. Cold affusion is a powerful auxiliary in the treatment of scarlatina. It reduces at once the burning heat of skin, and also the frequency of the pulse. When it is attended with these happy results, the patient often enjoys a calm and refreshing sleep. In some instances, however, it is of no avail, but it is never a dangerous remedy, as has been supposed. In mild cases, it will be sufficient to sponge the parts —the forehead, temples, face, and arms—with cold water, or

* The remarks respecting bloodletting in erysipelas, in this country (page 44), are applicable to the use of this agent in scarlet fever. It is very rarely called for in this disease, and as it has prevailed for several years past, would do more harm than good in the great majority of cases. Caution is necessary even in the application of leeches. Active purgatives must also be used with discretion, and carefully avoided in many cases. H. D. B.

vinegar and water. The employment of sinapisms, blisters, &c., should be confined to those cases in which it is necessary to establish counter-irritation. The application of a blister to the neck, when the throat is highly inflamed, merely increases the irritation of the skin, without alleviating the internal inflammation—it has even produced gangrene in some instances. During the period of convalescence, the patient requires great attention. Dietetic measures, the frequent use of the tepid bath, and mild laxatives, to guard against constipation, constitute the principal treatment required during this period.

The patient should guard against exposure to cold and errors of diet, which are frequent causes of anasarca. Should that disease, however, appear during convalescence, the patient must be kept quiet, and take light food and warm diaphoretic drinks; and if there is much fever, diarrhœa, or gastric disturbance, leeches must be applied to the anus, or to the epigastric region; it may also be arrested in a great measure by the use of the vapor bath.* The extract of belladonna has been used with much successas a prophylactic remedy in scarlatina, and may be used whenever the disease prevails epidemically.

The tincture is the most convenient form for its use, and the one which seems to be most efficacious. Of this, six drops may be given daily to children from eight to ten years of age, and the quantity increased or diminished according to the age. This remedy ought to be continued for ten or twelve days. It seems to modify the disease, and in some instances it gives immunity from it altogether. The sulphuret of antimony and calomel in combination, have been employed with a similar view, with advantage. The dose for a child from

* Warm baths, attention to diet, a free state of the bowels, and protection from atmospheric changes, constitute the most important points in the *preventive* treatment of the form of dropsy following scarlet fever. Dr. Golding Bird says that he can scarcely recollect a case of dropsy occurring after scarlet fever, when the warm bath was daily used as exfoliation of the skin commenced, and continued until a perspiring, healthy surface was obtained.—(*Urinary Deposits*—Phil. edit., 1851, p. 263.)

When effusion has once taken place, the indications are to relieve the congestion of the kidneys, which is found to constitute an important feature in the pathology of the disease; to remove the accumulated fluid, promote the action of the skin, and, in some cases, to support the system—for it is far from being always inflammatory in its nature. Not unfrequently, and especially in children of the poorer classes, iodide of potassium, in some bitter infusion, and also quinine, will be found useful; and where the system is much debilitated, or the patient is of a strumous diathesis, preparations of iron will prove of essential service.

For a more full account of the treatment of the dropsy following scarlet fever, and also of its pathology, we would take the liberty to refer our readers to *Lectures on Eruptive Fevers*, by Dr. George Gregory, Amer. Edit., appendix, page 355–7. H. D. B.

two to four years of age, will be about the sixteenth or eighth of a grain of calomel to the same quantity of antimony, mixed with a little sugar or magnesia, which should be repeated three or four times a day.

URTICARIA.

SYN.—*Essera; Aspretudo; Febris urticata; Exanthema urticatum; Purpura urticata; Papulæ cuticulares; Cnidosis.* Nettle rash.

Urticaria is a non-contagious exanthematous affection, characterized by irregularly-shaped patches or wheals of various sizes, sometimes paler, sometimes redder than the surrounding skin, in general extremely transient, and always accompanied with a very annoying itching. Urticaria is sometimes an acute affection, but in the majority of cases it assumes a chronic form, and its duration varies from two or three days to as many months and years. The patches sometimes disappear almost immediately after their formation: more frequently in the course of twenty-four hours, and in some rare instances they have continued for a week or fortnight.

Causes.—Nettle rash attacks individuals of all ages, and both sexes, but children and young persons of either sex, of a nervous and sanguineous temperament, appear to be more subject to it than any others. It prevails more during spring and summer than in autumn and winter; yet it is sometimes produced by cold. Urticaria is one of the few cutaneous eruptions which can be traced distinctly to its source. It is well known to result from handling the leaves of the *urtica dioica;* but this is only local, and usually of short duration. The most certain and most active cause is the ingestion of certain kinds of food, especially shell-fish of different kinds, as lobster, shrimp, crab, muscle, and smoked, dried and salted fish. The effect in these cases has been attributed to more or less putrefaction of these substances; but of several who partake of them, often a single individual only is affected. There must therefore be some peculiar predisposition, and this is sometimes so marked that certain persons cannot partake of these articles of food without invariably suffering from urticaria. Bitter almonds, mushrooms, cucumbers, salad, and even oatmeal, vinegar, honey, and certain medicines, such as turpentine, balsam copaiba, valerian, also produce this disease. Indeed, some individuals are so susceptible that the slightest pinching or rubbing of the skin is immediately followed by the eruption of a prominent itching wheal. It sometimes results from derangement of the digestive organs,

rheumatism, fever, &c. It may also be developed by dentition, and by mental emotions. It may coexist with other diseases of the skin of an entirely different character, and especially with lichen simplex. The course of this eruption is very irregular; sometimes attended with constitutional symptoms, and at other times without them; sometimes disappearing and returning several different times, and by these irregular returns prolonging its duration for weeks and even years. Urticaria has been divided into several varieties, according to the nature and progress of the symptoms. We shall describe the three following.

1. *Urticaria febrilis.*—This is the most common and striking form of the disease. It is preceded for a day or two by slight febrile symptoms, and pain at the epigastrium; a hot itching sensation in the skin then ensues, after which the eruption begins to appear over the whole of the body, but especially on the shoulders, loins, the inner surface of the arms and thighs, and around the knees, in the form of red or pale, raised blotches, sometimes circular, but more commonly irregular in their shape, surrounded with a bright red or scarlet border; they are hard round the edges, and of variable extent. Sometimes these wheals are very numerous, and coalesce in many places, and give the limb a swollen and bright red appearance. (*Urticaria conferta. Willan.*) An almost insupportable smarting and itching sensation accompanies the eruption, which prevents the patient from sleeping, and is greatly aggravated by the heat of the bed. This pruritus is much more severe in some parts than in others, especially about the scrotum. The eruption does not continue throughout the disease, which lasts seven or eight days. The wheals appear and disappear several times, on different parts of the body. They usually return in the evening, accompanied with a slight acceleration of the pulse, and are often reproduced by the patient scratching the parts. They sometimes disappear in a few minutes, in other instances they continue for several hours. In cases of less frequent occurrence, they remain one, two, or three weeks. (*Urticaria perstans. Willan.*) Depression of spirits, anorexia, fever, and more or less gastric disturbance, continue during the course of the attack. At length the symptoms gradually decline, the eruption follows, and nothing remains but a slight itching; but when the eruption has been violent, slight desquamation of the cuticle takes place.

This form sometimes presents all the symptoms of intermittent fever, coming on in regular paroxysms, and completely disappearing with the fever, and returning with it the

following day. It often then appears to depend on some pathological condition of the liver. We have several times observed the blotches assume a distinct jaundice color.* The itching is insupportable in these cases.

To this variety of urticaria belongs that produced by the different articles of food before mentioned. The patient, soon after partaking of some of these, experiences pain at the pit of the stomach, vertigo, nausea, and general depression; the skin becomes hot, and the eruption breaks out. The symptoms are nearly the same as those already enumerated, only that in the latter instance vomiting and diarrhœa frequently supervene. The eruption is more diffused, and the wheals become confluent, producing considerable stiffness and tumefaction of the parts affected. When they are complicated with erythematous patches, as sometimes is the case, desquamation frequently occurs. The disease generally subsides in the course of a day or two; in some rare instances it has terminated fatally; but this event is more to be attributed to the pernicious effects of the exciting cause, than to the violence of the disease when established. The eruption in these cases may appear within a few hours, or not until the next day.

2. *Urticaria evanida* is a chronic form of the disease. The eruption appears at irregular intervals, sometimes on one part, sometimes on another, and is sometimes confined to one part alone. It is unattended with fever, and generally disappears in the course of a few hours. The wheals resemble the marks produced on the skin by flagellation; they are not surrounded with an inflammatory border, and are only accompanied with a smart itching. This variety continues for several months, sometimes for years, M. Biett has seen it last seven years. This form occurs more frequently in females, and in persons with great susceptibility of skin. It generally depends on chronic derangement of the digestive organs, especially of the stomach; but it also attacks the most healthy subjects. *Urticaria subcutanea* is a very rare variety, and is characterized by violent acute pricking pain, as if a needle were thrust into the skin. Slight red spots, scarcely elevated, are scattered here and there, but there is no regular eruption. Deep mental emotions, and sudden change of temperature, seem to be its chief exciting causes. It is very difficult to overcome.

3. *Urticaria tuberosa.*—This is also a rare variety, and

* Dr. Graves (*Clinical Lectures, Philad. Ed.*, p. 122) gives cases of the connexion between urticaria and jaundice.—H. D. B.

exhibits characters of great severity. Instead of slightly-prominent blotches, we find broad, hard, deep-seated, and painful tuberosities, which impede motion. It appears chiefly about the extremities and lumbar regions towards evening and at night, and disappears entirely the next day, leaving the patient fatigued, weak, and greatly depressed. We have seen it at the hospital of St. Louis accompany a quotidian intermittent. It had lasted for four years in this case, and the eruption appearing about the face, throat, and chest, occasioned great swelling and puffiness of the features, accompanied with so much dyspnœa and irregular action of the heart, that the patient became blue in the face, and would have perished, but that we had recourse to copious venesection. It was at length cured by M. Biett with Fowler's solution. This variety generally occurs in intemperate persons. It usually lasts several months.

Diagnosis.—The form and elevation of the blotches, the itching, and the fugitive character of the eruption, will readily distinguish urticaria from the rest of the exanthematous eruptions. In *lichen urticatus*, which may be mistaken for urticaria, the papulæ are rounder, less prominent, less extensive, harder under the finger, and of a deeper color. They never disappear suddenly; and, moreover, we may always detect, in the vicinity of the spots, a number of true papulæ, which will distinguish it at once. Urticaria tuberosa may be always distinguished from *erythema nodosum* by the regular and continuous course of the latter disease. Finally, the different varieties of urticaria are often complicated with *erythema*, *roseola*, and sometimes with *impetigo* and *lichen*.

Prognosis.—The eruption itself is usually without danger; but is always a troublesome and distressing affection, on account of the great itching which accompanies it, and its obstinate duration. *Urticaria tuberosa* may sometimes prove a serious disease.

Treatment.—When urticaria is the result of direct and evident causes, it requires scarcely any treatment. If the eruption should not disappear quickly, acidulated local applications, diluents, and a few tepid baths are all that are required. To allay the smarting and itching, acetate of lead lotions, a solution of carbonate of potass, or alkaline baths, will be found most efficacious. Mild purgatives are often useful; but when the eruption is produced by some irritating food, vomiting should be immediately excited, if it has not already taken place, after which strong acidulated drinks ought to be administered (half a drachm of sulphuric acid to

a pint of barley water or sugar water), and, every half hour, from thirty to forty drops of ether on a small piece of sugar.

When it assumes a chronic form, great attention must be paid to diet, with the view of ascertaining and avoiding the particular kind of food which excites the disease. It is sometimes necessary to change the habits of the patient altogether. General bleeding, or the application of leeches to the anus, in young plethoric subjects, and in females with menstrual irregularities, will often be attended with advantage. In obstinate cases alkaline or vapor baths, or the vapor douche, will be found very efficacious. Acidulated drinks and mild laxatives should be conjoined with the foregoing remedies. When urticaria assumes an intermittent character, bark or quinine must be prescribed, and, if these fail, much benefit may be derived from Fowler's solution, in small and repeated doses.*

* In no disease affecting the skin is the connexion with disorder of the digestive organs usually so easily traced as in urticaria. We see the acute form of the disease directly and speedily produced by certain ingesta, and are warranted in the inference that, in the subacute and chronic forms, the eruption, with the excessive irritation of the skin by which it is accompanied, may be referred to some derangement of either the primary or secondary process of digestion, and doubt not that more extended research will lead to the detection of evidences of these disorders in the excretions, especially the urine. In one case, in which that fluid was examined by Dr. Maclagan, he found a deficiency of urea and of uric acid, and attributed the great irritation of the skin which existed to the retention in the system of solid matters which ought to be eliminated from it. (*Monthly Jour. Med. Science*, Aug. 1846.) In this case, colchicum (the tincture of the seeds) was found to triple the quantity of urea, and to increase the quantity of uric acid tenfold, after its use for a fortnight. The irritation of the skin gradually diminished, and finally disappeared entirely under the internal use of colchicum.

Acidity will often be found to prevail in urticaria, both in the acute and chronic form; and hence, in the acute, antacids and antacid laxatives are generally required; while in the chronic, the moderate and long-continued use of alkalies, especially when combined with diuretics, will sometimes succeed when acids have failed. Liquor potassæ, in combination with sweet spirits of nitre, and the extract or tincture of hyoscyamus, will sometimes afford relief, either alone, or with a bitter infusion or tincture, as of gentian or cinchona. In some cases tonics are more especially indicated, and chalybeates will then often be found of service. Mr. Kerr has recommended (*Monthly Jour. Med. Science*, May, 1848) the internal use of the persesquinitrate of iron (pernitrate?) in the ordinary doses, as very successful in several cases of urticaria. Warm salt water baths are often useful in chronic cases.—H. D. B.

VESICULÆ.

THE diseases which belong to this order are characterized by small elevations of the cuticle, formed by the collection of a transparent serous fluid. These cuticular elevations are called vesicles. In general, the fluid contained in these vesicles readily loses its transparency, and assumes an opaline or yellowish tint. The serosity may be reabsorbed into the system, but it is more frequently effused upon the surface, where it forms at first whitish scales, and subsequently thin yellow and lamellated incrustations.

The description of the vesicular affections naturally follows that of the exanthematous diseases, in which the inflammation merely produces injection of the capillary vessels; whilst, in all cases of vesicles and bullæ, the inflammatory process is followed by effusion. In certain exanthematous affections, as measles, scarlatina, and erysipelas, nothing is more common than to meet with partial elevations of the epidermis on the inflamed surfaces, containing a transparent fluid; in short, true vesicles. It is very probable that in these particular cases the local irritation is more intense where the vesicles appear than elsewhere, and that the serous effusion is the natural result of this excess of inflammation.

The very small size of some vesicles, as those of sudamina and of eczema, has led to the supposition that they occupy the extremity of the vessels through which perspiration is excreted. Late anatomical researches, as well as some recent clinical observations, seem to confirm this view of the subject.

The vesiculæ, like the pustular diseases, are naturally divided into two classes—those with an inflamed base, and those unaccompanied with inflammation. (*Phlysacia* and *Psydracia*.) Sometimes red, hard, elevated, and circumscribed spots precede the formation of vesicles for a day or two. Again, on the contrary, the vesicles appear abruptly, and the serous effusions apparently takes place as soon as the skin becomes infected with the morbid virus. *Varicella, vaccinia,*

herpes, and *the itch*, belong to the first variety. The *sudamina*, *eczema*, and some of the bullæ, which differ from the vesiculæ merely in their size, form the second division. The vesiculæ, considered independently of the diseases with which they may be complicated, invariably pursue an acute course. The duration of the vesicles is always brief, but some of these affections continue longer than others, as, for example, the progress of varicella, sudamina, and, generally speaking, of herpes, is essentially acute; whilst, on the other hand, eczema and the itch, although they sometimes may follow an opposite course, are usually chronic affections.

Symptoms.—These diseases are sometimes preceded by general febrile symptoms, but they frequently appear almost imperceptibly, and without any accompanying phenomena, except a slight degree of itching. Occasionally they appear on a red and inflamed surface, but they are as often present without the slightest traces of inflammation. At one time they are small, pointed, or globose; again, they are large, projecting, and irregular, or considerally flattened. In some cases, they appear in a scattered form, in others they are agglomerated, forming large patches containing a multitude of small silvery whitish points. This appearance is particularly striking in certain cases of *sudamina*, in which the eruption presents the appearance of minute drops of dew scattered over the surface. The vesiculæ not unfrequently assume an irregularly circumscribed form. Frequently, as in cases of herpes, for example, they form semicircular patches, or even perfect rings.

The serum of the vesicles is usually transparent at its first formation; so much so, that it resembles drops of water scattered over the surface of the skin. By degrees this fluid becomes opaque; it is sometimes reabsorbed, but most frequently it dries into thin, scaly, and friable crusts. Sometimes these scaly incrustations leave behind them a dry but red surface when they fall off; at other times, fresh incrustations are formed on the same spot, by the drying up of the fluid which exudes from the inflamed surfaces. When vesicular eruptions succeed each other, those parts of the skin where they were situated become thickened, and are rough to the touch. When the disease assumes a chronic form, the incrustations are whiter, thinner, and very nearly approach the true squamæ. The slightly thickened and lamellated form of the crusts of the vesicular eruptions demand especial attention, as they furnish the best means of distinguishing vesicles from certain other cutaneous affections. The laminated or squamous form of the crusts is particularly evident in eczema.

In general, the vesicles gradually disappear without leaving any traces behind; they are sometimes succeeded by small scars, as seen in varicella; they may terminate in genuine cicatrices. The vesicles of herpes are succeeded by a slight ulceration, terminating in a more or less marked cicatrix.

Seat.—Vesicular eruptions may attack every part of the cutaneous surface; they frequently cover the whole body, as, for instance, varicella, miliaria, and sometimes eczema. Even the itch, in some cases, simultaneously affects the whole of the cuticular surface. Generally speaking, however, eczema, herpes, and the itch, are confined to certain regions clearly circumscribed. Besides, the itch usually attacks the hands and fingers, and the folds of the joints where the skin is thin and delicate. Herpes, on the other hand, attacks the trunk and face.

Causes.—The itch is the only one amongst the vesicular eruptions that is decidedly contagious. Some writers have asserted that varicella is also produced by contagion, and that it may be propagated by inoculation; but there is not sufficient evidence to prove the correctness of this statement. They attribute this affection to a certain varioloid contagion, modified by the constitution of the individual. It generally assumes an epidemic character, and prevails most frequently in the early months of the year. Eczema also prevails at this season more than at any other. Everything that tends to excite the circulation and the functions of the skin may occasionally produce some of the vesicular eruptions, as sudamina, eczema, and herpes. Eczema may sometimes depend on external causes, such as irritation applied directly to the skin, a burn, or the application of a blister.

Diagnosis.—The presence of vesicles, independently of the characteristic symptoms of each variety of these affections, will always be sufficient to prevent any mistake in the diagnosis. There are some vesicular eruptions which at first sight may appear to be easily confounded with pustular eruptions, but the diagnosis can readily be cleared up, by bearing in mind that the former invariably commence with vesicles, which, on losing their transparency, never contain any other than a sero-purulent fluid. Moreover, some of the vesicles preserve their transparency all along. The scaly crusts which the vesicles leave behind them afford a still more valuable means of ascertaining the nature of the primary affection. The sero-purulent fluid of vesicles invariably terminates in thin, laminated, scaly incrustations; whilst pustular eruptions usually terminate in collections of true pus, accompanied by a considerable degree of inflammation, and, instead of thin

crusts, they give rise to thick, rough scabs adhering firmly to the surface of the skin.

Prognosis.—The vesicular eruptions, generally speaking, are not dangerous; they never terminate fatally; nevertheless they should not be regarded too lightly. Chronic eczema, in particular, may lead one astray in the prognosis, as to its probable duration. It requires some tact and observation to be able to give a correct opinion on this point.

Treatment.—When these affections assume an acute form, an antiphlogistic treatment will be necessary. When they are chronic, they require particular remedies, and frequently active treatment; which, however, they are often enabled to resist for a considerable period.

MILIARIA,

SYN.—*Sudamina; Febris miliaris; Purpura alba; Purpura rubra; Papulæ sudoris;* Millet-seed rash.

Miliaria is characterized by an eruption of vesicles which seldom exceed the size of a millet-seed. These vesicles spread in considerable numbers over a large surface, and are generally symptomatic of some more serious disease.

The miliary eruption frequently forms a very important phenomenon in the progress, and symptoms of the disease; as, for example, in the epidemic miliary fever; at other times it is of little value as a means of diagnosis, and the physician cannot form any decided opinion from its presence. Thus, miliary eruptions often precede variola and measles, and are present in the last stages of typhoid fevers, and in other diseases in which the serous membranes are more or less involved. It is in the last-named cases that the name of *sudamina* is particularly applicable, whilst that of *miliaria* belongs especially to the severe affection so well described by Sydenham under the name of miliary fever.

Causes.—The miliary epidemic generally attacks adults of a lymphatic or sanguineo-lymphatic temperament. Women are more subject to it than men. The existence of miliaria as a distinct fever, belonging to the same class as variola, measles and scarlatina, has been often doubted by writers, especially by Willan and Bateman. These authors also attribute the appearance of Sudamina, in cases of puerperal and typhoid fevers, to the hot stimulating treatment to which the patients were subjected. The miliary fever of Sydenham, and the miliary sweat of other writers, deserve, in our opinion, a special place among the skin diseases. If a stimulating treatment may be considered as the accidental cause

of the eruption in some instances, we have had, on the other hand, frequent opportunities of observing that the most rigid antiphlogistic measures could not prevent its development. This observation applies in particular to the sudamina of puerperal fever, scarlatina, and typhoid fever.

The eruption generally follows irritation of the skin or copious perspirations. It prevails mostly during dry, warm weather in the summer season. Miliaria accompanies many gastro-intestinal affections, and generally appears during a paroxysm. It frequently attends puerperal fever, especially when several of the serous membranes are involved. It is also developed in meningitis, in certain cases of rheumatism, and not unfrequently in scarlatina and measles. In general, miliaria may be considered, as we have before observed, to be symptomatic of some other important affection; but there are cases in which it assumes an idiopathic form, as, for example, when it appears in healthy subjects after violent exercise in warm weather; in these instances it is generally accompanied with copious perspirations. The eruption is then attended with a disagreeable sensation of heat and itching. The number of vesicles is sometimes very considerable, but they are ephemeral, and disappear in the space of twenty-four hours.

Progress and Symptoms.—The miliary eruption is preceded and accompanied by peculiar symptoms, which invest it with a special character; these are, a remarkable degree of depression accompanied with fever, perspiration, and a tendency to fainting. The patient complains of a painful constriction of the thorax, respiration becomes difficult, the pulse is soft, and often assumes a very remarkable intermittent character. These premonitory symptoms appear three, four, and even eight days before the eruption; and the disease is generally prolonged by successive eruptions for one or two weeks. Miliaria has this peculiarity, that the violence of the early symptoms, and the oppression of which the patient complains so much, receive but little alleviation from the appearance of the eruption.

The vesicles appear principally on the trunk, and especially on the thorax and neck, either behind or before; after these, the limbs are the parts most frequently affected. It seldom appears on the face. The eruption is almost invariably confined to a certain circumscribed spot; it rarely spreads over the body.

The miliary vesicles usually appear in patches of more or less extent, or else they are grouped together. Sometimes they become confluent, and then constitute genuine bullæ,

which, although small, form a striking contrast with the rest of the eruption. They vary much in number; a considerable part of the body may be covered with them, or they may only be scattered here and there, over certain regions. The vesicles are at first small, prominent, and so transparent, that the fluid which they contain appears as if it was scattered over the skin, like so many drops of clear water or of perspiration. At a more advanced stage they become globular, and the fluid assumes a milky color and loses its transparency. Sometimes the seat of the vesicles assumes a deep erythematous red color, which may be seen through them. (*Miliaria rubra.*) When the limpid serum is replaced by the milky fluid already mentioned, the vesicles which cover this red surface present a singular pearly appearance. (*Miliaria alba.*) This is very remarkable in scarlatina, where a great number of vesicles are spread over large surfaces of a deep raspberry color.

If the vesicles are not interfered with, they will terminate invariably by resolution, and will never leave scars behind them. They frequently occasion considerable exfoliation of the epidermis, which, however, is often confined to the exact spots occupied by the vesicles.

In epidemic miliaria, the danger does not subside with the appearance of the eruption; symptoms of inflammation of the mucous membrane of the air-passages and bowels frequently continue with considerable intensity, and are generally accompanied with important lesions of the brain and lungs. The real danger in this affection consists in the diseases which accompany it, of which the eruption may be regarded as symptomatic. However, the appearance of the vesicles should not be considered as altogether without importance, for many cases occur in which their absence or sudden disappearance are followed by fatal terminations. These untoward results do not always depend on physical causes, as cold, shiverings, injudicious regimen, &c., but they may even be suddenly produced by strong mental emotions. When this eruption accompanies other diseases, its physical characters do not change, but its duration is very variable; it does not, generally speaking, continue longer than twenty-four hours, nor does it, during its course, seem to affect the original disease in the slightest degree. The miliary vesicles, as already observed, always terminate by resolution. The idiopathic form terminates in sweating or miliary fever about the third or fourth week.

Diagnosis. — Eczema is the only affection with which miliaria could be confounded. The rapid progress and short

duration of the latter, form, however, an important difference between them. Besides, in eczema the vesicles are confluent, and a multitude of them may be seen crowded and agglomerated together in a small circumscribed space; whilst in miliaria the vesicles are almost always isolated, and much larger than the vesicles of eczema.

Is there any difference between the vesicles of miliaria and those of sudamina? M. Barbie says, that "miliaria usually commences in small red spots, sometimes very numerous, and invariably accompanied with itching, and even severe smarting. That the shape of the vesicle is conical, and that the fluid they contain is opaque and purulent. That sudamina, on the contrary, are never preceded by redness or itching, but appear suddenly, and are of a globular form." These characteristics are not sufficient to form a distinction. Both names belong to one and the same vesicular affection.

The precursory symptoms of miliaria may sometimes lead the physician to believe that variola, scarlatina, or measles is about to be developed. It is by comparing the premonitory symptoms of those diseases with those of the one under consideration that this error can be avoided. The vomiting and pains of the limbs, so marked during the invasion of variola, are never present; neither do we meet with the coryza, ophthalmia, and bronchial catarrh of measles, nor the sore-throat of scarlatina. The pathognomonic symptoms of miliaria are the extreme depression with tendency to sweating and syncope, remarkable constriction of the chest; and, above all, a peculiar state of the pulse, which is soft, frequent, and intermitting.

Prognosis.—Epidemic miliaria is the only dangerous form of the disease. The vesicular eruption does not of itself present any danger as a complication of other diseases; it merely announces a state of general constitutional excitement, and further than this it is of little importance.

Treatment.—The vesicular eruption does not require any particular treatment. It is the original disease that the physician should attack; and, in the majority of cases, a cooling and antiphlogistic plan of treatment will be found most efficacious, as cold acidulated drinks and aperients. The treatment of miliary fever is the same; but when any of the viscera become involved, more active measures must be resorted to. Mild diaphoretics—the preparations of antimony, &c., have been employed with much benefit.

VARICELLA.

SYN.—*Variola spuria; Pemphigus Varioloides;* the Chicken-pox; the Swine-pox.

Varicella is a non-contagious disease,* characterized by an eruption of vesicles, at first transparent, but finally becoming opaque, which are preceded and accompanied with febrile symptoms, and dry up between the fifth and eighth day. Formerly varicella was considered to be merely a variety of small-pox; but Heberden proved it to be a distinct affection, differing from variola in its causes, symptoms, and duration. With the introduction of vaccination new difficulties arose, from the appearance of a new species of varioloid disease, bearing a close resemblance to varicella. The disputes respecting the nature of varicella continue to the present day, but it still appears to us right to retain it amongst the vesicular affections, and to describe it as a distinct affection from variola.

There are two varieties of varicella. In the first the vesicles are small, but slightly elevated, and contain a colorless fluid (*Chicken-pox*). In the other the vesicles are large, globular, soft, and broader in the circumference than at the base. The fluid is at first transparent, but finally assumes a milky appearance (*Swine-pox*). Both varieties may appear at different periods with the same symptoms, whether they occur previous to or after variola or vaccination. It is erroneous to suppose that they cannot prevail epidemically without variola. We have frequently seen varicellous epidemics without observing a single case of variola, especially in boarding-schools. In general the disease only attacks persons once during their lives. It is, however, in some instances developed several times in the same individual. It is chiefly observed in young persons, although adults are not exempt from its attacks.

Symptoms.—Varicella is preceded for a day or two by general indisposition, languor, thirst, anorexia, and constipation. There is frequently nausea, vomiting, pain at the epigastrium, hot skin, flushed face, quick pulse, and a tendency to perspiration. These symptoms may be more or less severe, but they generally continue for two or three days after the appear-

* Our authors, in the edition of their work in 1847, still state this to be a non-contagious disease; but we feel no hesitation in regarding it as decidedly contagious, and this we believe to be the opinion of practitioners generally.—H. D. B.

ance of the eruption, which generally commences on the trunk, more rarely on the face, and continues to appear in fresh places for several successive days.

1. *Varicella lenticularis*, or chicken-pox, first appears in small, red, irregularly rounded elevations, at the centre of which minute transparent vesicles are quickly formed. These vesicles increase gradually for two or three days. Some are acuminated, others flattened. About the second or third day, the serous fluid has a milky appearance; there is much itching, and the vesicles become shriveled and faded. On the fourth day they are surrounded with red areolæ. Desiccation commences on the fifth, and on the sixth they are succeeded by small, brownish, scaly incrustations. These thin scabs dry from the circumference towards the centre, and fall off towards the ninth or tenth day. As the vesicles appear in succession for two or three days, the different stages of the eruption may be seen at once in the same individual, and the duration of the disease may thus be prolonged until the eleventh or twelfth day.

2. *Varicella globata*, or swine-pox, is preceded by the same symptoms, and developed in a similar manner. The red spots are quickly replaced by large vesicles, containing a transparent fluid, which becomes opaque about the second day of the eruption. The vesicles have then attained their greatest size; they are soft and flabby to the touch, of a pearly white color, larger in circumference than at the base, and surrounded with an inflammatory areola. About the third day the vesicles are faded and wrinkled, the contained fluid is thicker, and has become of a yellowish color. As the itching is generally pretty smart, the patients, particularly when children, tear the vesicles, in consequence of which the inflammation is increased, and a thick yellow pus formed. This accident occurs most frequently on the face. The scabs which replace those pustules continue for some time, and leave small pits or scars. This occurrence may also happen in the former variety. The vesicles are replaced about the fourth day by small, laminated, brownish crusts. These desiccate from the circumference towards the centre, and fall off in about four or five days, leaving small red spots, which gradually disappear.

Diagnosis.—It is very easy to distinguish varicella from well-marked small-pox, of the distinct kind, by the regular progress and gradual development of the variolous pustule; but it is not so easily distinguished from modified variola. However, in the latter disease the precursory symptoms are very severe, amongst which pain in the loins is especially

remarkable, which never occurs in varicella. In modified variola the pustules are small, circular, and generally depressed in the centre. Frequently after the desiccation of the scaly crusts, small tubercles appear, which subside very slowly. In varicella the vesicles are at first transparent, but subsequently contain a sero-purulent fluid. They are never succeeded by small tubercles, as in modified small-pox. We may add, that varicella is not, in our opinion, a contagious disease, whilst modified small-pox may be transmitted by inoculation, and may even in some instances excite a severe form of variola.*

Treatment.—The treatment of varicella is very simple. The patient should be kept in bed, in a room of moderate temperature. Regimen, cooling and refreshing drinks, and a mild aperient now and then, are all the remedial measures necessary even in the severest form of the disease.

ECZEMA.

SYN.—*Crusta lactea; Dartre; Squammeuse humide.* Humid Tetter; Running Scall.

The term eczema was first adopted by Willan to designate one of the vesicular eruptions. This affection is characterized by an eruption of small vesicles on various parts of the skin, closely crowded together, and frequently occupying broad irregularly-defined patches.

Eczema may appear under different forms, according to the condition on which it depends. It was, no doubt, owing to this circumstance, that Willan divided it into three varieties—*E. solare, E. impetiginodes, and E. rubrum.* M. Biett has been in the habit, for many years, of describing it in his clinical lectures under two forms, the *acute* and *chronic*, and we shall adopt his method.

Acute Eczema.—Under this division we shall class, 1st, *Eczema simplex*, which, from the mild course it pursues, con-

* In addition to the above diagnostic marks of varicella may be mentioned, that the vesicles are often irregular in their shape, and sometimes oblong; that the fluid in them is contained in a single cavity; that the eruption usually appears on the trunk first, and is also more rapid in its progress than varioloid, being scabbed over on the fifth to the sixth day; that it is successive in its development, and is followed by thin brownish scabs, instead of tubercular indurations—also that it appears almost exclusively in children, and that previous vaccination has no effect on it.

At the same time, it is proper to add, that there is high authority for regarding both varioloid and varicella as identical in nature with variola. This was the opinion of the late Dr. Thompson, of Edinburgh, and also of some continental writers, and of some in our own country—but I do not consider it advisable to burden a work so elementary as the present with even an abstract of the arguments on the subject. H. D. B.

stitutes a perfectly distinct variety, but very different from the chronic eczema, which succeeds the acute form of disease. 2d, *Eczema rubrum;* 3d, *Eczema impetiginodes.*

1. *Eczema simplex.*—This variety appears in the form of minute vesicles, crowded together on different parts of the skin, and is unattended with inflammation. It appears without the slightest precursory symptoms; the patient feels a slight itching sensation, and is surprised to find it produced by an eruption of more or less extent. The vesicles are very numerous, set close together, transparent, small, indolent, and present a shining appearance; the fluid which they contain becomes turbid and opaque; it is soon after absorbed, the vesicle desquamates, or else it bursts, and forms a small, thin, scaly disc, which soon becomes detached. This variety never terminates in the inflamed patches, serous exudation, or in the reappearance of the thin crusts observed in the other forms. It never leaves the slightest trace behind. It follows a mild course, and is usually prolonged by successive eruptions, and generally lasts for one, two, or three weeks, sometimes even longer than this. Eczema simplex may become general, but is more frequently confined to certain regions. Amongst other places, it is observed frequently on the arm and fore-arm, and between the fingers, where it sometimes fixes itself, and very much resembles itch. It is never accompanied with any other symptom than that of itching, which is often very troublesome, especially when the eruption is general.

This variety of eczema most frequently attacks young people, and females in particular. It is often produced by friction, and the application of irritating lotions and ointments. We frequently see it in individuals whose business compels them to remain long exposed to intense heat, near stoves, furnaces, &c. Finally, it occasionally occurs without any appreciable cause; thus, for instance, it frequently appears between the fingers of women during child-bed. It is a mild affection, unaccompanied with febrile symptoms; it is sometimes complicated with lichen, and frequently with itch; resulting, in the latter instance, from the use of the ointments used to cure it. In the majority of cases, eczema appears in a much more acute form than the foregoing, and presents two other perfectly distinct varieties.

2. *Eczema rubrum.*—In this variety the eruption is accompanied with considerable heat and tension, the skin is inflamed, and assumes a bright red color; if it is closely examined, it will be found to be prickly, and covered with small, prominent, silvery-looking points, which at a more advanced

period become true vesicles, and when fully developed, are about the size and form of a pin's head, transparent, and surrounded with a well-marked inflammatory areola.

About the sixth or eighth day, sometimes earlier, the redness diminishes, the fluid becomes absorbed, the vesicles die away, and the disease terminates in a slight exfoliation, produced by the debris of the vesicles. If the eruption be examined at this period, it will be found still to present certain well-marked characters. It presents a reddish surface, which lasts for some days after the vesicles have disappeared —scattered over with small round spots, surrounded with a whitish border, with ragged edges, which indicate the line of demarcation between the elevation of the epidermis that forms the vesicle, and the areola that surrounds its base.

Eczema rubrum does not always terminate in so mild a manner. Instead of subsiding, the inflammation may persist, or even become augmented: the vessels become confluent, burst, and give exit to the fluid, which was at first transparent, but is now perfectly opaque. This fluid flows over an already irritated and inflamed surface, and produces slight excoriations, whence issues a serous effusion more or less abundant. However, this serosity soon diminishes. It becomes thickened, concretes, and forms thin, soft, and sometimes very broad incrustations, which are frequently renewed, and in disappearing leave an inflamed surface behind. The serous exudation gradually ceases, the crusts become drier and more adherent, and are not renewed so often. The diseased skin by degrees resumes its natural condition, proceeding from the circumference to the centre, and the disease itself terminates in two or three weeks. It frequently happens that in place of declining, these symptoms continue for a much longer period, become more intense at intervals, and the eczema then becomes chronic—a very remarkable condition which we shall have to speak of by-and-by.

3. *Eczema impetiginodes.*—Whether in this variety the vesicles assume the usual form of those of eczema rubrum at the beginning, as is most usually the case, or that the progress of the inflammation is so rapid that its results do not appear to us until they are in an advanced stage, it often happens that we have two distinct diseases (a vesicular and a pustular) combined and existing together.

In *eczema impetiginodes* the inflammation is much more acute, the skin is swollen under the eruption, the vesicular fluid loses its transparency, and becomes purulent. These agglomerated purulent vesicles frequently run into one another, and soon burst. The fluid concretes, and instead of pro-

ducing laminated crusts like eczema rubrum, soft, yellow scabs, composed of one or more layers, are developed. These scabs fall off, and give exit to a reddish serosity; they are reproduced, and pursue the same course, until at length the inflammation diminishes, and the purulent vesicles are not redeveloped so often, or in such numbers. The scabs gradually become thinner, the surface beneath them is not so red, and at length the skin resumes its natural color and condition. This eruption may continue for two or three weeks; it may be confined to a single region; it sometimes assumes a general character, when it is accompanied with febrile symptoms, and becomes much more severe.

We may often observe different degrees of inflammation in the same individual, especially when the eruption is general, or quite extensive. Thus we may observe the vesicles, at first transparent, passing into the pustular state; sometimes half the vesicle may be opaque; and a yellowish color, and greater thickening of the other half, indicates the transition that is taking place. In cases where this variety is confined to a particular part, vesicles of *E. rubrum* may be seen in the vicinity of the vesiculo-purulent eruption, and they are also often observed in the centre of the eruption. Finally, *E. impetiginodes*, in place of terminating in twenty or thirty days, may pass into the chronic state; but then it does not differ from chronic eczema, which succeeds *E. rubrum*, and in this stage it only produces *true vesicles*, the pustular vesicles becoming much more rare. *E. impetiginodes* is not, therefore, a form of *E. rubrum* complicated with the pustules of impetigo, but an eruption of vesicles, transparent at the beginning, and passing into the condition of pustular vesicles instead of true pustules. Otherwise, the disease would be a genuine form of *impetigo*, for at a certain period almost all the vesicles become pustular, and nevertheless we shall see, when treating of the diagnosis, that there are well-marked distinctions between these two affections.

The inflammation is sometimes so active, that the disease may be complicated with the pustules of impetigo, and even with the larger pustules of *ecthyma*. These contain pus almost at the moment of their formation, their base is larger, and the fluid thicker and yellower than that of the others.

Acute eczema is generally accompanied with pretty severe febrile symptoms. Sometimes, when confined to a certain extent, it seems as if it was to be a very severe disease, and yet it will pursue a regular course, and terminate speedily, without occasioning any other disturbance than a slight acceleration of the pulse.

Chronic eczema.—Whatever may have been the symptoms by which it is ushered in, eczema frequently passes into the chronic state. The skin being constantly irritated by the ichorous discharge, and by frequent eruptions, becomes deeply inflamed and excoriated, and fissures form about the joints. There is a continual and copious discharge of serosity, which is constantly saturating the linen; and in withdrawing the latter, care should be taken not to tear the vesicles, and produce rents, which often give issue to a considerable flow of blood. They leave behind a red, soft, and swollen surface, which often retains their impression. The eruption may continue for many months without much diminution in the serous discharge.

On other occasions, the exudation begins to decline after a certain period. It becomes thick, forms lamellæ, incrustations, and small, thin, soft, yellow, slightly adherent scabs, extending considerably, the bases of which are dry, but inflamed. These laminated crusts form more slowly, are more dry, and the patient seems upon the point of convalescence, when, without any apparent cause, the inflammation is greatly increased. The skin becomes red again, and is covered with a new crop of vesicles, which soon burst, and the disease pursues the same course as before. It may thus be protracted for years with similar exacerbations, occurring at certain intervals.

Again, there are other cases in which there is not the slightest exudation. The scaly incrustations are drier, more adherent, and not so yellow. The skin is thickened, and is marked with deep fissures. The crusts, which are easily detached, exhibit a slightly inflamed surface on falling off. Sometimes, however, especially in cases of general chronic eczema, the skin remains of a bright red color even for months, and is covered here and there with dry, thin, flaky crusts. It is also cracked, and there is no perceptible exudation of serum. In this state eczema resembles, and has been confounded with, *psoriasis*, inasmuch as the incrustations are not now produced by the concretion of an exhaled fluid, but seem rather to be, as in the true scaly diseases, lamellæ of the epidermis. The appearance of vesicles will explain the real nature of the eruption. M. Biett has pointed out, in his clinical lectures, many cases in which eczema became a true scaly disease. The vesicular character becomes more evident as the malady approaches its termination. In some instances, particularly when eczema is confined to the limbs, it only occupies one or two small spots, around which the skin is smooth, tense, and shining; this form is covered with whitish

lamellæ, as thin as the epidermis. No vesicles appear on these polished surfaces, and the diagnosis is very difficult, if a new eruption, or a knowledge of the preceding one, and sometimes even the presence of vesicles scattered round the circumference, does not throw light on the nature of the disease.

Chronic eczema, although at the beginning confined to a small space, may become extended over a large extent of surface. In some rare cases, it has been observed at the commencement to occupy a space not larger than a crown-piece, and yet it gradually spread, until it covered the whole limb.

Chronic eczema is invariably accompanied with intense itching, more distressing than the severest pain. The patient in vain struggles against it, but he cannot, however, resist the urgent desire to scratch himself, and thus increases his sufferings.

These itching sensations are particularly intolerable when eczema is confined to certain parts, as the inner part of the thighs, for instance. It is then often accompanied in women with a chronic discharge, and extends to the anus and vulva, and sometimes to the vagina, where it produces an intense degree of itching, which places the patient in a pitiable condition.

After a certain period, the itching begins to subside, the serous exudation gradually ceases, the scaly incrustations dry up, and the skin is less inflamed. The seat of the eruption contracts, the process of healing begins at the circumference, the lamellæ become thinner and smaller, they cease to appear, the skin is still a little more red than natural, but this color soon disappears altogether. Finally, the disease becomes reduced to a small, dry, red surface, which is covered with extremely thin laminated crusts. The surrounding skin is smooth, tense, and firm, and only slowly resumes its natural state. The redness, as already stated, always continues for a certain time after the disappearance of the eruption.

The duration of chronic eczema is very variable; it may continue for months, and even years.

Seat.—There is no part of the skin which may not be the seat of eczema; but there are certain parts on which it appears more frequently than on others; *e. g.* round the beard where the follicles are numerous; the pubes, the groins, the scrotum, and the axillæ. It may be confined to one particular region, as the breast, the scalp, or the ears, and constitute some important local varieties.

It generally attacks several regions at once; indeed, we

have seen it cover the entire cutaneous envelope, both in an acute and chronic form. M. Biett is of opinion that the anatomical seat of this affection is not in the sebaceous follicles but in the vascular membrane. (*Dict. de Med. 2d edit., art. Eczema.*)*

Causes.—Eczema is not contagious; however, in certain rare instances, it appears to have passed from one individual to another by the prolonged contact of two mucous surfaces. M. Biett has observed many cases where eczema was transmitted by coition. It frequently attacks adults; women seem to be more subject to it than men. It generally appears during the spring and summer. The spring equinox, the summer solstice, and sudden changes of temperature, are marked by exacerbations of chronic eczema. It generally appears without any known cause; but it is occasionally the result of some direct agent, as the action of intense heat, exposure to the rays of the sun, &c. It sometimes follows the application of a blister, and the eruption may then extend over the whole arm or thigh. Eczema is frequently produced by dry frictions, and especially by inunction with irritating ointments. It is thus that the variety called *mercurial* is developed, and which does not differ either in its symptoms or progress from the others.† It is often observed on the fingers of sugar refiners, or after a burn, and may be produced by any excess, particularly by the abuse of spirituous liquors. Whatever may be the influence of direct causes on the development of acute eczema, it is evident that there is a peculiar disposition of the economy to which is to be attributed its passage into a chronic state, and its prolonged duration in that form. Certain local varieties are produced and kept up by the causes which affect the parts they occupy. As, for example, chronic leucorrhœa will prolong eczema for an indefinite period. The handling of metallic and pulverulent substances is a frequent cause of eczema of the hands. It is one of these varieties which has received the name of bakers' itch. But this affection is produced sometimes with papulæ, sometimes with vesicles. Another proof of the worthlessness of a classification which mistakes causes for effects.

Diagnosis.—Eczema, in each of its varieties, may be con-

* In the last edition of their work, our authors regard the extremity of the sudoriferous ducts as the anatomical seat of eczema.—H. D. B.

† Rayer describes the vesicular eruption produced by mercury as a distinct affection, under the name of *Hydrargyria*, and as caused by the internal as well as the external use of that article. This corresponds with my experience respecting it. —H. D. B.

founded with other diseases perfectly distinct from it, and its diagnosis is, therefore, of the highest importance. *Eczema simplex* has frequently been mistaken for *itch*, to which, at first sight, it has a strong resemblance. Both are developed without inflammation; they occupy generally certain parts or localities, as the wrist, the sides of the fingers; they produce a smart itching: but the vesicles of itch are pointed, while those of eczema are flatter: the vesicles of eczema are always grouped, while in itch they are usually isolated and perfectly distinct from each other, presenting a single vesicle, or two, or three only on a surface of some extent, as the inner sides of the fingers for example, which is never the case in eczema. The itching of eczema is a kind of smarting sensation very different from that of scabies. In the former there is real pain, whilst in the latter the sensation is more agreeable than otherwise. Finally, the itch is essentially contagious, and eczema, generally speaking, is not.

Eczema rubrum may sometimes be confounded with *miliaria*, but in the latter affection the vesicles are never confluent as in the former, in which a vast number may suddenly appear on the surface. The vesicles are more voluminous in miliaria than in eczema; besides, the febrile symptoms which usually attend symptomatic miliaria, and which indicate some latent severe disease, will suffice to distinguish the one from the other. That variety of miliaria which follows severe exercise in the heat of summer has a considerable resemblance to eczema; but the vesicles are more scattered, there are copious perspirations, and the eruption disappears suddenly in the former instance.

Eczema impetiginodes presents several well-marked characters to distinguish it from *impetigo*. The vesicular affection invariably occupies large surfaces; impetigo, on the contrary, is confined within a narrow compass. The pustules of impetigo are never transparent at the beginning; they have a larger base, and contain a thicker fluid. The pustular vesicles of *E. impetiginodes* are always vesicular at their origin, and never contain true pus, but a yellowish seropurulent fluid. Besides, their different terminations indicate still more clearly the distinction between these vesicles and the pustules of impetigo. In the latter the pustules constantly terminate in thick, rough, uneven, yellowish scabs, whilst the pustular vesicles of eczema merely form thin soft incrustations, more broad than prominent; and, moreover, we always find in this affection vesicles of E. rubrum around the eruption, which never occurs in impetigo. The traces or marks which these two affections leave after them on the skin also

present distinctive characters. Those of impetigo have a bright red color; and occasionally that eruption is followed by slight cicatrices. This never takes place in E. impetiginodes, which leaves merely slight red spots.

E. impetiginodes might be confounded with the *itch*, when the vesicles of the latter are accompanied with pustules; but, leaving the pustules out of the question, which, in the majority of cases, are merely complications, attention should be directed to the numerous vesicles; and the characters which have been already mentioned as distinguishing the itch from *E. simplex*, will facilitate the diagnosis.

The diagnosis of *chronic eczema* is often much more difficult than that of any of the foregoing varieties. Amongst the eruptions with which it might be confounded we may mention *lichen*, two varieties of which are sometimes mistaken for eczema.

Lichen agrius, like eczema, is accompanied with a serous exudation, terminating in the formation of crusts; but these are thicker, yellower, and not so large as those of eczema, and are not unlike scabs. The surface of the skin left by them does not present a red, smooth, shining, and slightly excoriated surface, as in eczema, but is fretted with small prominent spots or papulæ, which may be detected by the eye or by the finger, if passed over the eruption.

In other instances lichen, like chronic eczema, may develope thin dry laminated crusts, without any serous exudation or local inflammation; but in these cases the skin is more thickened and rough than in eczema, so that it is often difficult to raise it between the fingers. Besides, in lichen we generally find papulæ scattered here and there near the eruptions, which may easily be recognised by their hardness and slow progress, exactly as vesicles are developed in eczema, near the eruption, which can readily be distinguished from the elements of lichen. Those varieties of lichen and eczema which attack the hands require the greatest care in distinguishing the one from the other.

Some varieties of chronic eczema have a great resemblance to *psoriasis;* but the presence of vesicles in the neighborhood of the eruption, and their reappearance in the former affection, is sufficient to distinguish them. Moreover the scales are always thinner, more dry and friable, although softer. They are also almost always accompanied with a discharge, which never occurs in psoriasis. After they fall off, the skin does not present, as in psoriasis, a smooth, red, and elevated, but a fissured surface. However, in certain rare cases of chronic eczema, the eruption may become general,

and the skin may assume a red tint, at the same time that it is covered with whitish laminated scales. The diagnosis is, in this instance, difficult, especially if the early phases of the disease have not been observed, and if there is no exudation present. It can, however, be distinguished from psoriasis by these signs:—the skin is neither elevated nor hypertrophied, as observed in the latter disease, and the cracks or fissures are the result of the muscular movements with which they correspond, and never spread over the surface, in every direction, as in *psoriasis inveterata*. But we again repeat, that it requires the greatest care and attention to form a correct diagnosis.

Prognosis.—Eczema is, generally speaking, a slight disease, especially its acute form; but when it spreads over a large surface and becomes chronic, it is an exceedingly troublesome and obstinate affection. The prognosis is not favorable when it persists for several years, and when new eruptions form at the time the disease appeared to be dying away. Without endangering the life of the patient, it embitters his existence, when it is prolonged in this indefinite manner.

It may coexist with lichen, and particularly with the itch. It is frequently complicated with the pustules of impetigo and ecthyma. In some rare instances it becomes converted into a still severer disease. It assumes the bullous form of Pompholix. M. Biett has related some instances of this kind. We have a case of a similar nature at present in the hospital.

Treatment.—The treatment of eczema simplex usually consists in the employment of refreshing drinks, lemonade slightly acidulated, tepid baths, and regimen. These measures are generally sufficient to dispel the eruption in a very short time. But when the disease is of long standing, and accompanied with smart itching, particularly when it is diffused over the skin, it will be necessary to administer laxatives occasionally, and alkaline baths containing from four to eight ounces of the subcarbonate of potassa or of soda, according to the age of the patient and the state of the eruption.

E. rubrum and *E. impetiginodes* require no other treatment than that necessary for acute inflammation. When they are local and circumscribed, diluent drinks and regimen will suffice. But when the disease occupies a large surface, and is accompanied with quick pulse, and especially when the patient is young and vigorous, it is necessary to have recourse to general or local bleeding. The lancet will be required in some cases after leeches have been employed in the vicinity of the eruption. If the disease is diffused, venesection may be repeated with advantage. In a word, the

only remedies which acute eczema requires are regimen, simple or emollient baths, local baths of bran water or of marshmallows; poultices of potato flour, and some emollient application, when the vesicles burst and leave a red, raw, and painful surface exposed. The preparations of sulphur, so injurious in the treatment of all the *dartrous* diseases, should be carefully avoided. With regard to the mercurial plan of treatment, we have frequently seen patients at the Hospital of St. Louis in whom *E. rubrum* was increased and kept up by this injudicious method. It often became converted into *E. impetiginodes*, and even complicated with the eruption of impetigo and ecthyma, and was thus prolonged for months. On the other hand, acute eczema, which may be diffused over the whole cutaneous surface, and appears to be a severe disease, yields in twelve or fifteen days to the antiphlogistic treatment above mentioned. In every case the first object should be to endeavor to remove the cause of the disease, if possible. Thus, for instance, the patient should guard against everything that would irritate the parts, and should desist from his usual employment, if it is found to excite the eruption. We have frequently observed, and amongst other instances, in the case of a laborer working in a laboratory, the eruption of *E. simplex* reproduced as often, and as soon as the individual resumed his work.

Chronic eczema, before it assumes a severe character, generally yields to the following treatment: Acidulated drinks, as, for example, a scruple to half a drachm of sulphuric or nitric acid to a pint of barley water; the nitric is more efficacious than the sulphuric acid; they are particularly beneficial in those cases where a copious serous exudation and a smart itching exist. The patient should commence with small doses, and take a little cold water after each dose, until the stomach becomes accustomed to the acidulated drinks. The temperature of the baths ought not to exceed 88 to 90 deg. Fahr. The patient should remain in the bath about an hour. It may be rendered emollient by mucilage, gelatine, &c. The quantity of gelatine necessary for a simple bath is from half a pound to a pound.

Laxatives are frequently required. They may be administered alone, or alternately with acidulated drinks. Thus, for example, in any bitter infusion, the sulphate of soda, or still better, the sulphate of magnesia in the proportion of half an ounce to the pint, may be administered in divided doses; also about two drachms of the acidulated tartrate of potassa in whey, will be found very efficacious.

The alkalies may be advantageously employed externally

as well as internally.* They are particularly useful externally when the emollient applications and remedies fail to remove the itching. In these cases, local baths, containing from half an ounce to two ounces of the subcarbonate of potash, or of soda, will sensibly diminish the irritation. The patient to take the bath before going to bed. Fifteen to thirty grains of bicarbonate of soda daily, dissolved in water, or in some bitter infusion, may be given internally. When the eruption resists these remedies and continues to spread, recourse must be had to more active measures, such as purgatives, sulphureous waters, baths, and the vapor douche. Calomel may be administered in about four-grain doses every morning before eating for a week or two. It should then be changed for Plummer's pill, or aloes, or jalap, in the usual purgative doses, attention being at the same time paid to the digestive functions. Seidlitz water might be advantageously prescribed in doses of one or two glasses every morning.

The sulphureous waters may be administered internally or externally. They are only useful when the disease is of a long standing, especially when it is confined to the lower extremities, and is free from all irritation. The waters of Bareges, Enghien, and Cauteretz, are most frequently employed; they can be made artificially by adding to a simple bath two or three ounces of sulphuret of potash, the quantity of which may be varied according to the degree of excitement to be produced. In every instance simple baths should be administered alternately with the sulphur baths. When sulphur is to be given internally, it should be mixed with two parts of barley water or milk. By these means, the quantity of the mineral water may be gradually increased, until it can be taken pure.†

Local or general, simple or emollient baths, as before stated, are the only measures that will be expedient at the com-

* The continued use of liquor potassæ, in doses gradually increasing from ten drops to thirty, and even fifty drops, three times a day, is frequently useful in this as well as in some other chronic affections of the skin. Dr. A. T. Thompson recommends carrying the dose as high as one hundred drops, three times daily, but I seldom exceed twenty-five drops at a dose. It may be taken in infusion of hops or some other mild bitter, or in small beer, as recommended by Sir B. Brodie, or in milk and water, or clove or ginger tea—I have more frequently given it in some preparation of the rumex acutus, or of sarsaparilla, or of taraxacum, often in combination with sweet spirits of nitre. H. D. B.

† Our own country is rich in sulphur waters of the most valuable kind. The sulphur springs of Virginia are favorably known, and our own State abounds in springs of this nature, of which those of Avon (Livingston county) have a long established reputation for their efficacy in these diseases, and those of Sharon (Schoharie County) and of Richfield (Otsego County) are much resorted to for this purpose. H. D. B.

mencement, and whenever the inflammation becomes more active. In the latter event, whatever may have been the previous remedies employed, the application of leeches in the neighborhood of the eruption will be attended with advantage.

Vapor baths are occasionally very useful in cases of chronic eczema, but the temperature should not be too high. The vapor douche is often of the greatest benefit when the disease is local. When the eruption is confined or reduced to a small compass, the cure may be hastened by the application of an ointment composed of the protochloride of mercury and lard. But it is only in exceptional cases, as it were, that unctuous applications should be used in the treatment of eczema, and it is rare that their application can be continued long. In the course of the treatment it will be often necessary to employ lead lotions in order to allay the itching, or else an emulsion of bitter almonds, dulcamara, or henbane.

Sometimes a severe form of chronic eczema will resist all these measures, and it will then become imperative to have recourse to a more active and vigorous plan of treatment, provided always that the digestive organs are not suffering from chronic disease. It is in those cases of rebellious eczema, that Biett's treatment succeeds in a manner truly surprising. With the aid of *tincture* of *cantharides*, which is particularly suitable for females, and, still better, some of the *arsenical* preparations, M. Biett has frequently overcome with astonishing celerity the most inveterate cases of eczema.

The tincture of cantharides should be given at first in doses of three, afterwards of five minims every morning, in a little tisan, and every six or eight days the dose may be increased gradually from five minims up to twenty or thirty, without inconvenience, taking care at the same time to omit the remedy for a certain period now and then, and always to recommence with the smallest dose.

Among the preparations of arsenic, the best are, Fowler's solution, Pearson's solution, and the solution of the arsenite of ammonia. The base of the first is the arsenite of potassa. It is administered at the commencement in doses of three minims in some inert fluid, every morning. After five or six days, it may be increased from two to three drops. M. Biett could never exceed fifteen drops a day, after repeated trials.

Pearson's solution is milder and more easily managed; it is more suitable for females, irritable subjects, and is the only preparation of arsenic that should be administered to children. Its base is the arsenite of soda in the proportion of the eighth of a grain to a drachm. It may be given in doses from a

scruple to a drachm. M. Biett introduced into practice, in 1818, the solution of the arsenite of ammonia; a very useful remedy. These three preparations may be often substituted with advantage for each other. Pearson's solution may succeed where Fowler's had failed, and *vice versa*. The administration of the arsenical preparations requires great caution and attention. If symptoms of irritation of the digestive organs appear, the remedy should be suspended; but the slight uneasiness caused by the medicine during the first few days of its administration, and which will soon disappear, should not be mistaken for that condition. Besides, it is often useful to discontinue its use for a few days and then resume it, as is also necessary with cantharides.*

Frequently in cases when the eruption is limited and assumes the scaly form, when the skin is dry and chapped, and slightly hypertrophied, as we sometimes observe on the hands, gently stimulating local remedies must be employed. In these cases, ointments, of the proto-ioduret, or deuto-ioduret, or proto-nitrate of mercury, will be found very efficacious. A little camphor may be added to allay the itching. These mercurial preparations have been employed externally with the greatest benefit, but as internal remedies their utility is doubtful, and sometimes they are decidedly injurious. It is in these cases that the sulphur baths, both local and general, may be employed with advantage. The beneficial effects of the vapor douche have been well proved in these instances. Caustic should never be employed in the treatment of eczema, in which it has indeed been strangely abused; the application of stimulating ointments is by far more advantageous.†

* Iodide of arsenic, first introduced into use by the late Dr. A. T. Thompson, and the liquor arsenici et hydrargyri iodidi, introduced by Mr. Donovan of Dublin, and hence called "Donovan's liquor," may also be used with benefit in appropriate cases. H. D. B.

† Mr. Phillips has found warm water a most efficacious application in chronic eczema, dipping the bandages in it, and covering the whole with oiled silk, so as to form a constant tepid bath. Dr. Ranking applies fresh cream, with liquor plumbi, instead of water, and considers the oiled silk the most important part of the plan.—(*Half-yearly Abstract of Med. Science, Jan.* 1845.)

Dr. Burgess mentions a lotion composed of bicyanuret of mercury, two grains, and distilled water one ounce, as the most beneficial application in the inveterate forms of eczema.—(*Eruptions of the head, face, and hands*, Lond., 1849, p. 34.)

Dr. J. H. Bennett regards chronic eczema of the scalp, chin, and pubis as, sooner or later, an almost entirely local disease, and local applications as constituting the chief part of the treatment. He uses a solution of 3ij. sub. carb. soda, to Oiss. water, which, he says, must not be used as a *lotion* merely, but that lint saturated with it should be kept over the affected part, and the whole covered with oiled silk, to prevent evaporation. He considers keeping the surface moist a necessary part of the treatment.—(*Monthly Jour. & Retrospect*, Edinb., Aug., 1849, p. 963.)

Gibert recommends the use of calamine ointment (lapis calaminaris), in partial

Before concluding the subject of eczema, we shall briefly describe one or two forms in which the disease is confined to certain parts, and presents some important peculiarities.

Chronic eczema of the mammæ is, more frequently than any other variety of the disease, confined within a very limited compass. It surrounds the nipple, and produces deep chaps. It requires active treatment, and is always very rebellious; we have seen it continue for years.

Eczema of the scrotum, and *of the inner and upper parts of the thighs* in women, is also very rebellious. It is the same as that which surrounds the anus. The vapor and sulphur douche, and fumigations, together with brisk purgatives, are the most effectual remedies. In robust individuals, who are otherwise in good health, purgatives may be freely administered.*

Eczema of the ear is also very rebellious, and as it is sometimes accompanied with considerable hypertrophy, it may be necessary to put a piece of prepared sponge in the external meatus, in order to prevent occlusion.†

Eczema of the scalp may appear with certain phenomena, which are the more important from their liability to be confounded with some varieties of porrigo. Thus we often see in persons attacked with this form of eczema a copious serous exudation, which mats the hair together. This fluid soon

eczema, and prefers the impure to the *prepared* calamine, which is the kind in Turner's cerate. A solution of alum, 3j. or 3ij. to a pint of water, is frequently very useful in chronic cases attended with moderate discharge and great itching, particularly when local. Also a lotion of bichloride of mercury, half a grain to an ounce of water, especially in cases of long standing. M. Trousseau speaks highly of entire baths of this article, and says that he never saw any harm from them, even in children. He uses ʒ ss of the bichloride for a bath. Others use the solution of this article as a lotion, of the strength of 3ss to 3ij to a pint of water. A weak solution of nitrate of silver, 1 or 2 grains to an ounce of water, will also allay the irritation in some cases.

I have derived great benefit from the use of oiled silk, in this as well as in other chronic affections of the skin, and also of very thin sheet India rubber, worn over the affected part, when the skin is dry and torpid. When there is much irritability of the skin, they cannot be borne.

Chronic eczema of the hands (one of the forms of the *salt rheum* in popular language) must be treated on the same general principles as the disease occurring on other parts—and care must be taken to keep the hands at rest as much as possible, and to avoid exposing them to alternations of moisture and dryness, and heat and cold. The nature of the local applications must be made to depend upon the duration of the disease, its condition at the time, and the irritability of the skin in each particular case. H. D. B.

* Gibert speaks highly of the following ointment in chronic eczema of the genitals:—℞ Yellow subsulphate of mercury, ʒj; laudanum, gtts. xij; lard, ʒj. H. D. B.

† Rayer considers the putting a piece of sponge in the external meatus, in *eczema of the ear*, as more likely to be attended with inconvenience than benefit, and this seems to be the most reasonable. H. D. B.

dries or concretes, and forming into scales, surrounds the hair in tufts, which are thus entangled with each other; and whether it is owing to a natural desquamation, or to this interlacement, these crusts soon become detached. This phenomenon is not so visible in females, but it will generally be discovered if the hair be examined close to the roots. The presence of these white shining scales in the middle of the hair has a very singular and remarkable appearance, especially in persons of dark complexions. In some cases the serous exudation is not so abundant; it forms small, whitish, dry, *furfuraceous* scaly incrustations, which freely fall off on the slightest friction, and reappear with wonderful celerity. These two varieties, which do not at all injure the bulbs of the hair, sometimes merely require for their treatment acidulated drinks and emollient lotions at the commencement, and when more advanced, alkaline lotions and gentle laxatives. It is sometimes sufficient when children are attacked, to wash the head with soap and water, and to comb it frequently. In other cases, however, they resist all these means, and render it necessary to resort to the more active remedies before mentioned.*

* Mr. Erichsen says that almost all the cases of eczema of the scalp which he has seen above the age of 17 or 18 years have been in females; and that, in these cases, it is almost invariably connected with some derangement of the menstrual function. (*Lond. Med. Gaz.*, Jan. 1846, p. 67.) He has found the same true in many cases of eczema affecting the ears. Hence the necessity of means directed to the removal of such disorder when it exists. When there is amenorrhœa, he uses the tinct. of cantharides, either alone, or combined with liquor potassæ, or Fowler's solution. The local remedies required are the same as in disease of other parts.

Acute eczema of the scalp is said to be rapidly cured by the cold water douche, employed daily, in the morning or at mid-day (not at bed-time), and continued from 5 to 20 minutes each time—water as cold as can be borne to be kept applied more or less constantly during the day.—(*Monthly Jour. & Retrosp.*, Sept. 1848, p. 191.)

In chronic eczema of the face in adults, Dr. Neligan prefers the iodureted iodide of potassium and arsenic, a combination of arsenical solution, iodide of potassium, and iodine. Locally, he uses an ointment of iodide of sulphur, 10 or 12 grains to ʒj white wax ointment, with 8 to 15 minims of chloroform; and an alkaline lotion combined with glycerine, substituting a wash of carbonate of soda for soap in all cases. In young persons, he uses an ointment containing 10 grains of tannin, and ʒ ss of glycerine, to ʒ j of white wax ointment, with 4 minims of chloroform, using alkaline lotions at the same time.—(*Dublin Quart. Journ.*, May, 1851, p. 341.)

In children, eczema of the scalp is often a very troublesome and very obstinate affection, not unfrequently continuing during the whole period of first dentition. The itching is often excessive. In the acute stage, emollient applications only should be used, or simple warm water, with which the head should be frequently and freely washed. Attention must also be paid to the stomach and bowels, and to the gums, and great caution exercised with regard to local applications which shall suddenly arrest the discharge; and when stimulating or astringent applications are used, it is most prudent to commence with those of the mildest form.

HERPES.

SYN.—*Dartre; Olophlyctide;* Tetter.

The term herpes was employed for a long period in as vague a sense as that of dartre. It was applied to many eruptions of a perfectly different nature, until at length Willan adopted it exclusively for the following distinct genus.

This genus is characterized by an eruption of vesicles, forming in groups upon an inflamed base, perfectly circumscribed, and separated from each other by intervals of sound skin. The form and seat of these groups constitute several well-marked varieties, which may be described separately. The different species of herpes usually follow an acute course. They generally last for a week, but in some instances they may be prolonged to two or three weeks. There are, nevertheless, cases in which the disease may continue for months. Herpes is rarely, if ever, accompanied with dangerous symptoms. The most usual phenomena are, slight indisposition, depression, anorexia, and rarely fever. In some few instances, herpes is produced by some direct agent, but in by far the majority of cases it manifests itself without any appreciable cause; and even when there is a direct evident cause, such as cold air, which usually occasions herpes labialis, there is at the same time a peculiar state of the economy, of which the eruption is symptomatic. The formation of vesicles in groups upon an inflamed base, is always sufficient to distinguish herpes from other vesicular affections. It is, generally speaking, a mild disease, pursues a regular course, and requires but simple treatment. Moreover, herpes may exist simultaneously with other diseases, either of the skin or of some internal organ.

and to apply them to only a part of the scalp at a time. Ointment of oxide of zinc, diluted citrine ointment, creasote ointment, may be used with caution when there is much discharge, and the bowels are open. Weak lotions of carbonate or sulphuret of potash will sometimes assist in allaying the itching and improving the condition of the surface. Decoction of wheat bran is one of the most convenient and most efficacious of the emollient applications. Infusion of elder flowers is also good for the same purpose.

In some cases of eczema of the *scalp and ears* in scrofulous children, tonics are very useful; and when the mucous membrane of the stomach and bowels will bear it, I have seen the most decided benefit from the iodide of iron.

In eczema of children, whether general or local, the diet is of the first importance; and if nursing, particular attention must be paid to the diet of the nurse. The tepid bath assists very much in allaying the irritation, especially during dentition. H. D. B.

Herpes Phlyctenodes.

Under the common denomination of herpes phlyctenodes, are classed those varieties of herpes which have no determinate form, and no particular seat. Herpes phlyctenodes is generally characterized by an eruption of small vesicles, which may be developed on any part of the body, and frequently on several parts at the same time. They become agglomerated, and spread over a surface which varies in extent from that of a crown to that of the palm of the hand. We commonly observe in the same instance very minute vesicles, and others the size of a large pea; but the smaller vesicles are always much more numerous than the larger ones. This variety is most frequently developed on the upper parts of the body, as the cheeks, the neck, the chest, and the arms: it rarely appears on the lower extremities. Generally speaking, H. phlyctenodes is confined to one or two vesicular groups, and disappears about the seventh or eighth day. However, in cases where it appears successively on several different parts, or when several clusters become almost united together, it may be prolonged beyond this period, but rarely beyond the second week. In some rare instances it has assumed a decidedly chronic form. There is at present, in our ward at the Hospital of St. Louis, a patient who has had for six months a patch of herpes, about the size of the palm of the hand, on the inside of the thigh, which has resisted the most energetic treatment, and especially the application of blisters. The eruption is not on any other part of the body. When herpes phlyctenodes appears in several groups, the latter are generally pretty distant from each other; but however close they may be, the skin between them remains perfectly sound.

Symptoms.—Each group, composed of six or eight vesicles, is developed in the following manner. A number of almost imperceptible red spots appear on the part about to become the seat of the eruption, and are crowded together within a comparatively small space. The next day the part appears red, inflamed, and covered with prominent vesicles, firm to the touch, and the size of which varies from that of a millet seed to that of a small pea. The redness generally extends several lines beyond each cluster of vesicles. The small vesicles are by far the most numerous; they are hard, globular, and transparent the first day, but the next day, or even before it, the transparency is replaced by an opaque or milky tint. An itching sensation, often very painful, frequently

accompanies the development of each group. The vesicles begin to fade about the third or fourth day, and by the seventh or eighth they have generally disappeared. Some of them contain a purulent fluid, others are transformed into brownish incrustations. They soon desquamate; but slight ulcerations are occasionally observed here and there. The red color remains for some days after the disappearance of the eruption, and then gradually subsides. This affection is seldom accompanied with any important symptoms. Indisposition, and sometimes anorexia and slight febrile disturbance, are the only phenomena which accompany it when confined to certain limits: moreover, these symptoms only appear with the eruption, and vanish as soon as the latter is developed. With regard to the local symptoms, which consist in a smarting and sometimes very acute burning sensation, as in H. zoster, they accompany the eruption through all its stages, and even continue after it has subsided.

Causes.—Herpes phlyctenodes generally attacks young subjects. In warm climates it is frequently produced by the rays of the sun. Excess in diet, anxiety, grief, and other causes of a similar nature, often seem to excite this disease; but in general the causes on which it depends are entirely unknown, or at least very difficult to be detected.

Diagnosis.—The characters peculiar to H. phlyctenodes, as for example, clusters of numerous vesicles situate on a red and inflamed surface, the extent of which varies from that of a crown to that of the palm of the hand, are sufficient to distinguish this variety from other affections, whether vesicular or bullous. *Pemphigus* is the disease with which it is most likely to be confounded; but they can be distinguished from each other easily by observing, that in herpes we find clusters of vesicles separated from each other, whilst in pemphigus the bullæ are isolated, and not in clusters. Sometimes, it is true, we find red patches in pemphigus, where the bullæ have been closer than usual; but by recollecting that the latter are bullæ, and not vesicles, we can seldom go wrong. Again, some of the vesicles may be transformed into bullæ, but they are very few, and are scattered here and there.

Herpes phlyctenodes cannot be confounded with *eczema*, unless in rare instances, where the vesicles of the latter appear in groups. Even then they may be distinguished by the following characters: the vesicles of eczema are less elevated, and redder; it is difficult to perceive the transparency; and finally, when they are grouped together, they become confluent, whilst those of herpes remain isolated

With regard to the other varieties of herpes, they only differ from this in their seat and form.

Treatment.—Herpes phlyctenodes is rather a mild disease, and requires merely diluent and acidulated mixtures, regimen, mucilaginous lotions and tepid baths. Bleeding is seldom required, and seems to be of little avail when it is employed.

Herpes Labialis.

This variety is characterized by small clusters of vesicles, more or less numerous and distinct, scattered irregularly around the mouth. Most commonly herpes labialis occupies a certain defined surface on either lip. It always appears on the external aspect, and generally at the junction of the mucous membrane with the skin. However, in some cases it is altogether confined to the external mucous membrane of the lip, whilst in others it is only to be seen on the skin immediately above the point of junction. Sometimes the clusters extend as far as the cheeks, the chin, and the ala of the nose; and in rare instances they have been observed in the pharynx.

Herpes labialis is sometimes preceded for several hours by a slight redness; on other occasions the eruption appears suddenly. The surface on which it is developed is swollen, and is attended with an acrid burning heat. It then becomes red, shining, and painful to the touch, and some vesicles begin to point here and there. The tumefaction of the lip extends beyond the vesicles, which are rapidly developed, and many of them run into one another. They are of various sizes, but the largest does not exceed that of a small pea, and are filled with transparent fluid. The irritating heat gradually subsides, as soon as the eruption is developed; the transparent fluid of the vesicles becomes opaque; and in the course of three or four days it assumes a yellowish tint, and finally becomes sero-purulent. By this time the redness and swelling have almost disappeared. Brownish crusts are now formed, which fall off about the seventh or eighth day of the eruption; when they disappear too early, they are replaced by others, which continue much longer. After the eruption subsides, it leaves behind a small red surface, which soon fades. Its appearance is almost always preceded by a state of general indisposition, which continues for twenty-four or forty-eight hours.

Causes.—Herpes labialis is very often produced by cold air, as, for instance, a person leaving a heated room, and going into a cold damp atmosphere, is very liable to be

attacked. It frequently accompanies coryza, sore-throat, stomatitis; and in those cases it sometimes penetrates to the inner surface of the lips, and even to the roof of the palate and tonsils. The contact of acrid and irritating food may also produce the eruption. It frequently supervenes on intermittent fever. It may be complicated with inflammation of some of the internal organs, but especially with that of the lungs.

Diagnosis.—The arrangement of the vesicles in clusters, their regular progress, the large size of some of them, which finally contain a sero-purulent fluid, will suffice to distinguish herpes labialis from *eczema* of the lips. It cannot be confounded with *psoriasis* of the lips, if the dry scales and striated furrows of the latter be borne in mind.

Treatment.—Herpes labialis is such a slight affection, that it hardly requires any treatment. However, when it is accompanied with the acrid heat and painful tension of the skin already mentioned, cold lotions, containing a few grains of sulphate of zinc, or sulphate of copper, and a few drops of the acetate of lead, will be of much service. No remedies can prevent the disease running its course. In every instance vicissitudes of heat and cold should be carefully avoided.*

Herpes Preputialis.

Herpes preputialis is known by the appearance of one or more small groups of vesicles on either the internal or external surface of the prepuce. It first appears in the form of several red spots or patches, more or less inflamed, rarely exceeding the size of a shilling, and generally much smaller. These patches are soon covered with small globose vesicles, which differ slightly from each other, according to their situ-

[* However mild this variety of herpes may be in its nature and progress, it is nevertheless frequently ushered in by an exceedingly smart feverish attack. I have more than once observed cases in which the eruption was preceded by a train of acute inflammatory symptoms, commencing with rigors, and terminating in the course of twenty-four hours in the development of vesicles on the lips, and on the prepuce at the same time. The severity of the symptoms would apparently indicate the advent of some more important affection than that of a slight vesicular eruption. In herpes labialis the vesicles are often tedious and slow in disappearing. As soon as each vesicle ripens, it should be transfixed with a fine pointed needle, so as to allow the contained fluid to escape, without exposing the surface. By this method the process of desquamation will be materially promoted, and the duration of the eruption considerably shortened. B.]

Dr. Neligan says that "if a strong spirituous lotion be constantly applied to the parts on which herpes labialis is to appear before the vesicles are developed, the further progress of the vesicles may generally be prevented," and that nothing answers so well as Cologne water.—(*Dublin Quar. Journ., May*, 1851.)

H. D. B.

ation. Those clusters situated on the external surface are slightly inflamed; the vesicles, which are transparent and distinct, follow the ordinary course of herpes, with the exception of their being reabsorbed; the vesicles then break down, and a slight desquamation ensues. Sometimes, however, the serosity becomes opaque at the expiration of a few days, and small scaly incrustations are formed over the seat of the disease, which terminates about the seventh or eighth day, frequently earlier. The inflammation is much more active when the vesicles form on the internal surface of the prepuce; they increase rapidly in size, and unite in groups of two or three vesicles to each. They are extremely thin, and so transparent that the red color of the skin beneath may be seen through them. The fluid soon becomes sero-purulent, small crusts are formed, which are gradually detached, either naturally or accidentally, and expose to view one or two excoriated spots, which can easily be distinguished from syphilitic ulceration. The skin soon resumes its natural color when the scabs fall off.

A slight itching at the beginning of the eruption, and a slight smarting when excoriations are present, are the only symptoms which accompany H. preputialis. This variety pursues an acute course, and very rarely lasts long. H. preputialis may assume a chronic form, and in this condition, as M. Biett has well observed, the accompanying symptoms are much more important and severe. The eruptions are frequently reproduced, the inflammation is deep seated, the prepuce becomes rough and difficult to draw back, the slightest movement cracks and tears it. The orifice contracts for a certain period; it often remains close to the mouth of the urethra, and yet the opening of the prepuce does not correspond exactly with the meatus urinarius, the oozing from which is constantly irritating the diseased parts. The edge of the prepuce becomes puckered, as if it was folded upon itself. In some cases the contraction is less marked, the meatus is free, but the edge of the prepuce is in the same condition. It becomes hard, like cartilage, and forms a kind of ring, which it is difficult to move. The exertions required to uncover a part of the gland frequently produce extremely painful abrasions all round this ring.

Causes.—This variety of herpes seldom attacks any but adults. The rubbing of the clothes, certain chronic discharges, the irritation produced by the secretion of the sebaceous glands under the prepuce, if allowed to accumulate, may produce the eruption. It, however, more frequently appears without any known cause. The contraction of the

urethra, which may be present at the same time, has no other relation with herpes than that of its coexistence.

Diagnosis.—The seat of this variety of herpes has frequently thrown much obscurity on the diagnosis, and it has more than once been mistaken for primary syphilis. If the peculiar characters of H. preputialis are borne in mind, it appears to us almost impossible to confound it with syphilitic ulceration. In the first place, it is a vesicular disease, and all the characters of the genus herpes are so marked, that it cannot for a moment be mistaken by any careful observer. No one could mistake the thin, flattened, scaly crusts for the thick elevated scabs of syphilis. The excoriations are quite superficial, and even throughout, and appear in groups, like the vesicles which preceded them. The syphilitic ulcerations, on the other hand, are remarkable for their depth, their hard elevated edges, and the whitish hard pellicle which covers them. Nevertheless, a vesicle of H. preputialis has frequently been mistaken at the commencement for a syphilitic sore. In these cases, cauterization, and even mercurial frictions, have often been employed to destroy the supposed disease. Under the influence of this erroneous treatment, herpes passes into the chronic state, and from a simple affection it becomes a rebellious and obstinate disease, which lasts for years, and ultimately becomes complicated with phymosis. Fortunately, it is always easy to avoid this error. It is sufficient to know that the venereal sore never commences with a vesicle, but with a redness and true ulcerative inflammation.*

Treatment.—Injections between the prepuce and gland of the decoction of marsh mallows, a few local emollient baths, and lemonade, are the only measures required in a majority of cases. However, in some instances, it becomes chronic, and resists the most energetic treatment. M. Biett has related many remarkable cases of this nature in his lectures, and we have seen many others. It will then be necessary to have recourse to emollient and alkaline lotions alternately; laxatives, soothing ointments, and vapor, alkaline, and sul-

[* Notwithstanding these striking and distinctive characters, it is often very difficult to distinguish at once herpes preputialis from a syphilitic sore, especially when the vesicles have formed on the inner surface of the prepuce, when they have burst, and when no perfect vesicles are present to assist the diagnosis. As soon as the cuticular envelope breaks or falls off, the abraded surface beneath is irritated and prevented from healing by friction against the penis, with which it is constantly in contact. The parts should be kept separate by a piece of dry lint interposed between them; and after one or two applications of a sulphate of zinc lotion, containing three or four grains to the ounce, the nature of the sore, if vesicular, will readily be detected. B.]

phureous baths. The frequent contraction of the mouth of the prepuce is the most rebellious and troublesome symptom. M. Biett has recommended, and we have several times used with success, the introduction of prepared sponge in this event. As a last resource, the operation for phymosis may be performed.*

Three important varieties of the genus herpes still remain to be described. They appear at first to be distinct species, but on closer examination they will be found not to differ from *H. phlyctenodes* except in their more determinate form. However, as they are of frequent occurrence, and as there still seems to be some doubt as to their nature, we shall describe them separately. *H. zoster or zona, H. circinatus,* and *H. iris,* are the varieties alluded to. Herpes iris occurs much less frequently than others. It was classed among the exanthemata by Willan, and has a great resemblance to a variety of roseola already described.

Herpes Zoster, Zona, or the Shingles.

It is surprising how herpes zoster could ever have been described as a species of erysipelas, with which it has no symptoms in common. Yet as it has been so regarded and described by writers on skin diseases, we shall dwell for a moment on the probable cause of that error. It arises, no doubt, from the fact that certain forms of erysipelas are complicated with bullæ, but there is a vast difference between the detached, circumscribed, and frequently enlarged elevations of the epidermis in erysipelas, and the small vesicles arranged in groups, and rarely exceeding the size of a pea, which constitute H. zona. This, together with the regular progress of the latter, the same as in H. phlyctenodes, is sufficient to establish the relationship of these two affections, and to distinguish H. zona from erysipelas.

Herpes zona is known by the presence of irregular patches, of variable size, and of a bright red color, covered with agglomerated vesicles, which appear in the form of a zone on the body or the limbs. The zone usually commences at a certain point of the median line, and extends around to a point on the opposite side, without ever going beyond that line. It appears most frequently on the trunk, in the shape of a semicircle or belt. It not unfrequently commences on the trunk and terminates on the limbs. Thus, it often begins

* M. Cazenave cautions against the application of caustic in this form of herpes. He says that cauterization transforms a superficial inflammation into a deep one, and increases the trouble, however slight the application which may be made.—(*Gaz. des Hôp. Sept.* 24, 1850.) H. D. B.

at the middle of the inferior posterior lumbar region, and passes obliquely round to the external and anterior iliac region, arrives at the groin, and terminates on the inner side of the thigh; or again, it commences on the upper part of the back, reaches first the posterior, then the anterior part of the shoulder, and terminates on the internal aspect of the arm, sometimes as low down as the elbow. Two other lines are occasionally observed issuing from this zone, one of which proceeds along the arm, and the other along the lower extremity. Its most frequent situation is round the base of the thorax. It is seldom seen on the limbs alone. We have most frequently seen it on the right side; while others have met with it oftener on the left. It is probable that it affects either side indifferently, and that the differences in its seat which have been noticed are only accidental. It is sometimes situated on the neck and face, and even extends into the mouth on one side. We have often observed it on the right side of the scalp. It never exists on two sides at the same time. Cases of herpes reported as having encircled the whole body, must be referred to *H. phlyctenodes*. In all cases these zones are formed not by a regular continuation of vesicles, but by isolated groups which pursue the same course, and their interstices are perfectly sound. Sometimes these groups approach near each other, at others they are widely separate.

The disease lasts from one to three or four weeks. It never assumes a chronic form, and it is evident from the passage so often quoted from Borserius (*Inst. Med.* vol. ii. p. 29), to establish the existence of this condition, that the name of chronic zona has been given to the painful ulcerated spots frequently remaining after herpes zoster.

Symptoms.—Herpes zona first appears in the form of bright red, irregularly-shaped patches, pretty close to one another, which are developed successively, at variable intervals, and thus encircle one half of the body. The patches sometimes commence at both ends of the zone at the same time, and become connected by the development of intermediate patches. Generally those which begin and terminate in this manner are larger, and have an irregularly-rounded form, whilst the patches that are between these are smaller. In some rare cases, their development is accompanied all through with a painful burning sensation. If they are carefully examined, a number of small prominent silvery-white looking spots may be detected, which soon increase in volume, and finally become distinct transparent vesicles, about the size of small pearls. They are fully developed in three or four days from the first appearance, and seldom exceed the size of a large pea.

They are, however, occasionally larger. At this stage, the skin on which the vesicles form is of a bright red color, and the redness extends for some lines beyond the seat of the vesicles. As new groups form, they follow the same course as those which preceded them. About the fourth or fifth day from the appearance of the eruption, the redness diminishes, the vesicles subside and fall off, and the skin beneath is wrinkled. The fluid, which was at first transparent, becomes opaque, in some instances blackish, and several of the vesicles contain pus; finally small, thin, brown, scaly incrustations are formed, which disappear in the course of a few days. Other groups of vesicles appear and follow the same course, and after the lapse of ten or twelve days no traces of the disease remain but the red stains, which slowly disappear. It sometimes happens, however, especially when the eruption is situated on the back, that slight excoriations, and even ulcerations, are produced by the rubbing of the parts against the bed during sleep, which prolongs the disease considerably.

Such is the ordinary course of H. zona, the form, duration, and progress of which may, however, frequently vary: as, for instance, the absorption of the fluid may occur about the fifth or sixth day, and the eruption itself disappear by desquamation on the seventh or eighth day. In other cases, especially in persons enfeebled by age or privation, the vesicles acquire considerable size, burst, and produce extensive and painful ulcerations, followed by well-marked cicatrices. In rare cases, particularly in very old cachectic people, gangrene of the skin sometimes occurs on those parts where the vesicles were formed. We have seen many cases of this disease at the hospital of St. Louis, but have never seen it accompanied with any of those severe febrile, and especially gastric symptoms, with which it has been erroneously associated. The only phenomena which we have observed as commonly accompanying H. zona, are slight indisposition, heat of skin, sometimes a slight increase of pulse, a painful feeling of tension in the seat and neighborhood of the eruption, and in cases of ulceration, severe pain, which continues up to the period of convalescence. M. Biett never observed any of the dangerous symptoms alluded to, in upwards of five hundred examples which had come under his notice.

Causes.—Herpes zoster chiefly attacks young persons with a fine delicate skin; men are more subject to it than women. It attacks old people, and appears more frequently in the autumn than in the spring or winter. It occasionally succeeds small-pox, and assumes, in some instances, an almost periodic

character. It may also put on an epidemic form. Formerly it was supposed to be hereditary.

Diagnosis.—This affection can hardly be confounded with any other; its vesicular character and the presence of the zone will prevent any mistake from occurring. Sometimes when the zone is beginning to appear, or when it is incomplete, and a few patches only are to be seen in the median line, it may be mistaken for *herpes phlyctenodes;* but it is often merely necessary to examine the opposite side of the body in those cases, in order to discover other groups of vesicles, and small red patches may be observed between these clusters, indicative of the formation of new groups. Besides, their being confounded would not occasion any inconvenience in the treatment, as they are both fundamentally the same.

Prognosis.—Herpes zona is, generally speaking, a mild affection. The only instances in which it assumes a severe character, are when it attacks persons of an advanced age; it then may terminate in ulceration and gangrene of the skin, but even in those rare cases it scarcely ever terminates fatally. The appearance of the eruption has often a salutary effect in checking the progress of some other more severe disease, which may coexist with it. Guilbrand relates several interesting cases of this nature. We have not met with any of a similar kind.

Treatment.—The affection, in the majority of cases, requires but very simple treatment; regimen, repose, diluent drinks, lemonade, &c., are all that is required, without any necessity for either local or general bleeding.

A very important point in the management of herpes is to prevent the premature rupture of the vesicles; and for this purpose we have been in the habit, for several years, of having the affected surfaces sprinkled several times a day with starch, and then covered with brown paper which has been oiled, directing the patient, at the same time, to keep as quiet as possible.

Simple baths are beneficial in cases where the inflammation is active, and the constitution irritable. Local applications are, for the most part, useless. Those which have been most strongly recommended are lead, or other astringent lotions.* The ulcerations may be dressed with mild

* M. Cazenave recommends elsewhere (*Bull. Génér. de Thérap.*, Sept. 1847,) smearing the patches with a little oil, and then sprinkling them with dry starch, which forms a kind of covering that protects the vesicles from any mechanical cause of ulceration.

M. Briquet has used collodion with success as an external application in herpes zoster, and says that it not only arrests the progress of the disease, but puts an end

opiate ointments. If the disease appears in an individual whose constitution is broken down by old age, or by some previous disease, tonics should be administered, and the strength recruited by nourishing diet. If gangrene supervene, recourse must be had to tonics and stimulating local applications. It is sometimes difficult to remove the pain, which remains after the eruption has disappeared. Frictions, anodyne applications, and blisters, are frequently required to allay this irritation. MM. Serres and Velpeau have lately recommended the *ectrotic* method, as very efficacious in H. zona. This is certainly one of those cases in which it has the best chance of succeeding, for it is not so much to subdue inflammation, as to allay the sensibility of the diseased parts, that it is required. However, it is generally of little avail in a disease, the treatment of which is usually so slight and simple as is required in herpes zoster.

Herpes Circinatus.

Herpes circinatus is a very frequent variety, and appears in the form of rings. It is characterized by the appearance of extremely small globular vesicles arranged in the form of circles, the centre of which is free, and the border red. This circular border is often pretty broad, compared with the centre, especially when the rings are small, and the redness extends beyond the vesicles the same distance on either side.

Symptoms.—The eruption is preceded by a redness of various degrees of intensity on the parts where the vesicles are about to form. The red color is usually confined to a surface not exceeding the circumference of a shilling; it sometimes, however, occupies a space about two inches in diameter. The redness is paler in the centre of the small rings. In the centre of the larger ones, the skin preserves its natural color. The rings are often perfectly round, and occasionally of an oval form. The red circular border is soon covered with a number of small vesicles, set close together, and of a globular shape. The transparent fluid becomes opaque, the vesicles burst, and form small thin incrustations, which soon become detached. The eruption generally termi-

at once to the severe pain which accompanies it.—*Gaz. des Hôp.*, Oct. 1, 1850.,

Oxide of zinc ointment forms a very good dressing when the vesicles break, and stramonium ointment, or opiated cerate, affords relief when there is much irritation —also an ointment of oxide of zinc and stramonium ointment, in the proportion of ℥j to ʒj. Warm and moist applications, as a general rule, should be avoided.

A plaster of belladonna is a convenient, and often a very effectual application for the removal of the neuralgic pains which sometimes follow herpes zoster, and which occasionally harass the patient for weeks, and even months. H. D. B.

nates about the eighth or tenth day, when the only trace remaining of its existence is a slight degree of redness, which gradually disappears. This is the usual progress of the disease; but in some cases the centre of the ring becomes inflamed, and produces a slight desquamation, but no vesicles appear. Sometimes the vesicles do not terminate by desquamation, but the contained fluid is absorbed, and they fall off by an almost insensible exfoliation. This occurs principally when the rings are small, and in these cases the vesicles are often so minute, that it requires close examination to detect them. A good magnifying glass will be found very serviceable in these cases. In other instances, the rings are very large, and the vesicles more developed, but the latter rarely ever exceed the size of a millet seed. When the rings are few, not diffused, and developed simultaneously, the eruption rarely continues longer than the tenth day. But in cases where the rings appear in numbers one after the other, the disease may be prolonged for two or three weeks. In individuals of a fine delicate skin, the redness often continues for a considerable period after the disappearance of the eruption. Although it may appear on any part of the body, its most frequent seat is on the arms, shoulders, chest, and especially the neck and face. We frequently see boys, and particularly girls, of a fair and delicate skin, with herpetic rings about the size of a sixpence on the cheek and skin.*

Causes.—Herpes circinatus most frequently attacks children, young persons and females. It affects particularly fair people with a fine, transparent skin. Sometimes it appears to be produced by cold. It may be developed on the face by stimulating or irritating lotions. No special cause can be assigned for it.

Diagnosis.—The peculiar and well-marked character of this variety would apparently obviate any error with regard to diagnosis. However, a small herpetic ring, the vesicles of which are slightly exfoliated, situated on a perfectly round and red surface, may often be mistaken for a patch of *lepra* without scales; but the depression in the centre and the prominent border of the one, and the even surface and the debris of vesicles on the other, will prevent this mistake

* There is another variety of *herpes circinatus*, which has been long known in England, but only observed within a few years in France. This affection, first seen by one of us in one of the colleges in Paris, and since in a large number of children, has been described by him (M. A. Cazenave) under the name of *herpes tonsurans*; it affects chiefly the hairy scalp. We shall refer to it again, when speaking of the diagnosis of porrigo. This variety is contagious.—(*Edition of* 1847.)—H. D. B.

occurring to any careful observer. Besides, it rarely happens that there is only one patch of lepra to be seen, and probably others may be found on different parts of the body more strikingly developed. The fact that the same name, that of *ring-worm*, has been applied to both *herpes circinatus tonsurans* and to *porrigo scutulata*, and that they are both contagious, may lead to difficulty in the diagnosis between them. However, one (H. circinatus) is a vesicular affection, and merely produces scaly crusts, is of short duration, is not contagious, and never causes loss of hair. The other (porrigo scutulata) is a contagious pustular affection, the progress of which is long and indefinite. It produces scabs, which gradually increase in thickness. It only appears on the scalp, and the hair falls off when the rings are developed. It is more difficult to distinguish it from *lichen circumscriptus*, the rings of which are very much larger than those of herpes; but vesicles are the elements of the latter, whilst the former are characterized by papulæ.

Treatment.—The treatment of H. circinatus is nearly the same as that of the other varieties, except that alkaline lotions may be advantageously employed in this form. The frequent application of saliva will often allay the smarting which accompanies the eruption on the face, and also the inflammation which attends it. Astringent lotions, composed of alum or sulphate of zinc, may also be used with advantage. When it affects several parts of the body at the same time, laxatives and alkaline baths should be administered.*

Herpes Iris.

Herpes Iris is an extremely rare form of this disease, which appears in small vesicular groups, perfectly rounded, and forming four erythematic rings of different shades of color. The patients often compare them to small cockades. Bateman was the first to describe this variety correctly, and also to place it in the genus herpes.

Symptoms.—It appears first in small patches, which are soon replaced by rings of different shades of color. About the second day a vesicle forms in the centre, which is speedily

* Herpes tonsurans is always very obstinate in its resistance to remedies, and not unfrequently lasts for a year or longer. The means which we have found the most successful are: 1. Frictions, every evening, with a little of the following ointment—℞ tannin, grs. xv; lard, 3 v; water, q.s.; 2. In the morning, lotions with a solution of subcarbonate of soda in distilled water (3 ss to a pint); 3. Alkaline baths.

It is also proper very carefully to guard the children affected against direct contact with others, if not to isolate them entirely. *Cazenave and Schedel, edition* 1847.)—H. D. B.

surrounded by many others of a smaller size. In the course of two or three days the central vesicle is flattened; the fluid it contains becomes opaque and of a yellowish hue; the rings are more developed, they now form four distinct circles, which successively surround the central vesicles, so as to form a disc about the size of a shilling. The first and central ring is of a reddish brown tint, the next a whitish yellow, the third and narrowest a deep red, and the fourth or external circle presents a pale rose color, which is lost insensibly in the color of the surrounding skin. These rings are often very numerous, but the various colors are not always so well marked. The third is the narrowest; each may be entirely covered with vesicles, but they are generally more numerous on the first. They terminate about the fifth or sixth day by the absorption of the fluid, and by slight desquamation. Sometimes the vesicles burst and form small thin lamellæ, which soon fall off. Herpes iris may appear on any part of the body, but its most frequent situations are the face, the hands, the instep, the fingers, the neck, &c.

Causes.—Herpes iris most frequently affects children, females, and persons of a fair skin, without any appreciable cause. It may coexist with other forms of herpes.

Diagnosis.—The only disease with which it can be confounded is *roseola annularis*. The latter, however, differs from the former, by the larger size of the rings, which sometimes exceed the circumference of a crown-piece, and by the absence of vesicles. Herpes iris may especially be confounded with this form of roseola, in cases where the vesicles have burst and disappeared; but generally, on closer examination, the debris of vesicles will be detected, which will prevent this mistake.

Treatment.—This affection is so mild, that it scarcely requires any particular treatment. The remedies suited to herpes circinatus will also answer in this case, if any be required. Herpes iris is so rare, that M. Biett had seen but very few examples, amongst the vast multitude of cases of skin diseases which came under his observation at the hospital of St. Louis during a long series of years. We have seen a beautiful example of this affection in his wards, in which the ring was situated in the middle of the forehead.*

* In the edition of their work in 1847 the authors say, that they have since seen several cases of this singular variety. We have met with a few cases of it.

The different forms of herpes are frequently connected with disorder of some portion of the digestive apparatus, and sometimes require an emetic, followed by a gentle purgative of an antacid character, and diluents, with mild farinaceous diet

SCABIES.

SYN.—*Psora*; *Gale* (French); *Scabbia* (Italian); *Krætze* (German); *Itch*.

Scabies or itch is a cutaneous affection caused by an insect, the *acarus scabiei*, and characterized by smart itching, with the formation of vesicles more or less distinct from each other, acuminated, transparent at their summits, larger at their base, which is of a rose color, and from which extends generally a furrow, sometimes straight, and at other times crooked, at the extremity of which the insect is found. Its favorite seat is the intervals between the fingers and the wrists.

The itch was known to the ancients; but, in Greece and among the Romans, under the name of ψωρα and of *scabies*, were confounded several other diseases than those produced by the presence of the insect, their names having been derived from the external characters.

Avenzohar, a native of Spain, is the first physician who expressly mentioned the insect of itch, he doubtless having often witnessed its extraction. But he did not point out the connection between the insect and the disease, having treated of the itch itself in another part of his work.

From Avenzohar, who wrote in 1179, to Moufet, whose work appeared in London in 1634 (*insectorum sive minimorum animalium theatrum*), no mention is made by authors of the acarus scabiei. Moufet gives a very good description of it, and of the furrows which it makes. Hauptmann described it, and gave a drawing of it twenty years afterwards. Since that time it has been described successively by Hafenreffer (1660), Ludovici (1678), Morgagni and Etmuller (1692), and by Bonomi and Cestoni (1683).

Linnæus tended rather to mislead than to throw light on the subject by speaking of the acarus scabiei as though it were the same as the acarus farinæ, describing it under the name of *acarus exulcerans*. His errors, however, have been corrected by Geoffroy, Gmelin, de Geer, Fabricius, Wichmann and Latreille.

for a few days—at other times, active mercurial purgatives, followed by alkalies and diuretics, with the warm bath, are required.

When chronic, mild mercurial alteratives, with laxatives and alkalies, as rhubarb and magnesia, or rhubarb and soda, with mild tonics and bathing, either the simple warm water, or alkaline, or warm salt water baths, are useful.

Liquor potassæ, as mentioned under the head of eczema, will often prove of service.—H. D. B.

The existence of the insect was still a matter of doubt in France, when, in 1812, M. Gales, formerly an apothecary of the Hospital of St. Louis, instituted experiments on more than three hundred persons affected with itch, and exhibited to a large body of physicians, and even to a Committee of the Institute, more than three hundred insects, of which he even described the habits, and of which a drawing was made. The insect exhibited by M. Gales, however, proved to be the *cheese mite*, and no insect could be found in the vesicles, as stated by him. Incredulity succeeded this exposure, and continued to prevail until 1834, when M. Renucci then a pupil at the Hospital of St. Louis, pointed out the manner of finding the acarus, showing that it must be sought for not in the vesicles themselves, but by the side of them, and at a short distance from them. It is sometimes found about a quarter of a line from an isolated vesicle, presenting a small white point under the epidermis, from which it can be raised by the point of a needle; at other times, it is found at the extremity of the small furrow, which is one or two lines in length, and even longer, extending from the vesicle.

Since that period, M. Raspail has given a very good description of the insect, with excellent drawings of it, and M. Albin Gras has studied the action of certain articles on it to ascertain what will destroy it the soonest. He found that it lived three hours in pure water; two hours in olive oil; one hour in a solution of sugar of lead; three quarters of an hour in lime water; twenty minutes in vinegar, alcohol, and an alkaline solution; twelve minutes in a solution of sulphuret of potassa; nine minutes in spirits of turpentine; from four to six minutes in a concentrated solution of hydriodate of potassa. It survived one hour in the flour of sulphur, and sixteen hours in the vapor of sulphur under a watch glass. The solution of the hydriodate of potassa is therefore the most powerful agent which can be used externally with safety. M. Albin Gras has extracted them alive from a patient who had taken three sulphur baths, while he has frequently found them destroyed after a single friction with the ointment of Helmerich.

Scabies is never caused by inoculation with the fluid from the vesicles, nor by that from any other of the eruptions produced by the insect, but only by the insect itself.

The acarus scabiei is a small, round, greyish body, sometimes in motion, and at other times at rest. With good sight, and especially with a magnifying glass, the head and fore legs of the insect can be easily distinguished. Under the microscope, it presents an oval body, the back somewhat

convex, on which are marked numerous fine curved lines, parallel with each other, and of unequal length in the different groups. Under the abdomen are eight legs, four of which are in front, and have at their extremities a sucker of trumpet shape, with hairs at their base. The four hind claws are without suckers, and terminate with a hair of greater or less length. The head is covered with fine hairs, and has a trumpet-shaped protuberance, shorter than those on the fore legs, with a hair longer than itself on each side of it.*

Causes.—It is settled that the acarus is the sole cause of itch. It can be communicated even from a dead body, as long as the insect is alive.

Scabies is never epidemic; and is only endemic among uncivilized nations, and in countries where the habits of the people are filthy.

Youth, the sanguineous temperament, the male sex, handling of woollen substances, the seasons of spring and summer, tropical climates, neglect of cleanliness, are predisposing causes of the disease. It occurs more frequently in children and youth, doubtless because there are more of these ages than of any other.

It is much more frequent among males than among females, probably because the former are more exposed to it. Those of lymphatic and sanguineous temperament are much more frequently affected with it than those of the bilious temperament, in which it is of rare occurrence; because this temperament itself is comparatively less frequently met with.

Seat.—Scabies affects especially the hands, the spaces between the fingers, and the front part of the wrist, and the limbs in the line of flexion. It is never seen on the face. It is not unfrequently found on the feet.

Progress and Symptoms.—The period of incubation of itch, or the period at which it appears after exposure to direct contagion, varies from several days to several weeks, and even months.

In *children* it usually shows itself at the end of four or five days; but the time is longer in feeble and delicate children, while it is much shorter, even only two days, in very strong and robust children.

In *adults* the time varies, as before mentioned, and is always shorter in spring and summer than in winter. It also lingers, even extending to several months, in old persons and

* For a scientific and much more minute description of the acarus scabiei, see *Wilson on Diseases of the Skin*, second edition, 1847. H. D. B.

those laboring under chronic disease. The vitality of the dermoid system appears to be the principal cause of these remarkable differences.

Itching over different parts of the body, and especially between the fingers, and on the front part of the wrists, with very slight chills, and a general irritation of a peculiar kind, usually precedes the eruption of vesicles, and increases with their appearance. This itching, with the development of vesicular, erythematous, papular, and pustular eruptions, in different degrees, are the symptoms of itch which discover themselves.

The itching sensibly increases towards evening, particularly when in bed, and also under the influence of all causes which increase the cutaneous circulation, as heat, exercise, stimulating drinks, &c. Small, more or less papular elevations soon begin to appear, of a pinkish tint in young and vigorous persons, on the top of which a small transparent vesicle soon forms. From this vesicle, when opened by the nails of the patient, a very small quantity of clear fluid, like water, escapes, and forms, in drying up, a small, rough, friable, and slightly adherent scab.

The vesicles are accompanied by small furrows, made by the insect in his progress under the epidermis, which resemble the fine scratches that the point of a pin would make drawn lightly over the epidermis. These furrows have one extremity corresponding with the vesicle, and another marked by a small, round swelling, where the insect is found. The appearances of these furrows vary with their duration, and with the age and occupation of the patient. It is only at the end of the furrow, opposite the vesicle, that the insect is to be found, from which it may be extracted with the point of a fine needle. The furrows are usually found on the hands, in the intervals between the fingers, the wrists, the axillæ, the inside of the thighs, on the feet, even on the soles, on the pelvis, scrotum, and sometimes about the knees. Sometimes it is very difficult to find the insect, and occasionally impossible, and always requires some practice.

The vesicles left to themselves rarely, if ever, become pustular; but when irritated by the nails, especially in young and vigorous patients, and in those accustomed to the use of stimulants, they may assume a pustular character; and pustules of *impetigo* and *ecthyma* will then be found among the original vesicular eruption.

Scabies varies in its progress and development with the age, constitution, temperament, and health of the patient, and with the season of the year, climate, &c. In the young and

robust, and those in full health, it spreads rapidly over the surface, and the whole body is sometimes more or less covered with different kinds of eruptions, without any decided characteristics, mingled with brownish scales, with more or less redness of the whole skin; and to these are sometimes added large pustules of ecthyma and boils. But whatever may be the extent of the eruption, it is never attended with those dangerous results which have been attributed to it.

Terminations.—Itch never terminates spontaneously, but may last for years, and even for the whole life, as is the case in some countries; but in these cases, the skin becomes accustomed to the presence of the disease, and it causes but a moderate degree of irritation.

We admit but one kind of itch, that produced by the acarus scabiei, and consider the vesicular form of eruption as the only one belonging properly to it.

Diagnosis.—Strictly speaking, the existence of itch can only be conclusively proved by the presence of the insect; and the certainty of this is established by finding it, and by the marks it leaves. The vesicle is sufficiently characteristic in a great majority of cases to establish the diagnosis.

The eruptions most likely to be confounded with scabies are *eczema simplex* and *prurigo*. But the vesicles of *eczema* are flattened, while those of scabies are acuminated, and rest on a reddish base, which is never the case with those of eczema. In *eczema*, also, they are grouped, and often run together, while in scabies they are always less confluent, and usually distinct. The sensation produced by *eczema* is a kind of general smarting, a burning kind of itching; the itching of scabies is not of that character, and has well marked exacerbations. Also, *eczema* is not contagious, at least very rarely so.* Some individuals have a vesicular eruption every year after having been cured of itch: this is not scabies, but eczema; generally eczema simplex. This is doubtless owing to some modification of the innervation of the skin originally produced by the scabies.

The elementary form of *prurigo* is papular, and its usual seat is the back, the shoulders, and the line of extension of the limbs. The papulæ, which are almost always torn by scratching, have their tops covered with a little clot of dried blood, of a black or dark color, which differs entirely from

* *Eczema* frequently appears on the face; scabies never does. *Eczema* has a tendency to disappear and return again, and particularly to return at different seasons of the year; this is never the case with scabies. Still there are some cases in which the diagnosis is attended with extreme difficulty, and perhaps is not possible, though probably such cases are of rare occurrence.—H. D. B.

the small, yellowish, friable scale which covers the vesicles of scabies when they are torn. The itching is more severe and burning in *prurigo*, which is, besides, never contagious.

Lichen simplex might also be mistaken for scabies; but it is characterized by papules, and those are usually very near together, which is rarely the case with the vesicles of itch; the papules of *lichen* are of the same color as the skin, while the papules which precede the vesicles of itch are of a reddish color, as is also true of the vesicles themselves at their base. When lichen affects the hands (which is the form most apt to be mistaken for itch), it occupies the dorsal surface, and not the spaces between the fingers as itch does, and also covers the external surfaces of the limbs, and the itching is less severe than that of scabies. In *lichen urticatus*, the itching is very severe, but the eruption always continues papular. None of the varieties of lichen are contagious.

All these different eruptions may coexist with scabies, and thus obscure the diagnosis, which must then be founded on the presence of the insect, or of the furrows which it makes.

Scabies may occur at the same time with syphilis, scrofula, and pellagra, without their being influenced at all by each other. In some very rare cases, scurvy may impart a livid tinge to the eruptions of scabies, and when these are numerous, they may soon become covered with brownish scabs.

Treatment.—Scabies is only cured by the extraction or the destruction of the insect which causes it. The duration of the disease, under a treatment capable of destroying the acarus without increasing the irritation of the skin, varies from six to twelve days; its complications may prolong the cure several months.

A great variety of remedies have been recommended for the cure of itch; we can only mention those most used, and which have proved most beneficial. Mercurial preparations, besides almost always developing other eruptions, may cause swelling of the salivary glands, salivation, and even glossitis, and should be renounced entirely.

The *liniment of Jadelot* is often useful, although it gives rise to eczematous eruptions, the mean duration of which is fifteen days; the same is true of the *lotions of Dupuytren*, which consist of four ounces of sulphuret of potash, dissolved in a pint and a half of water, with the addition of half an ounce of sulphuric acid; the affected parts to be washed with it twice daily. This wash causes painful smarting, especially in irritable persons, and the mean duration of treatment is sixteen days.

Of the great variety of ointments used we have long given

the preference to that of *Helmerick*, a modification of which Biett employed almost exclusively. It is known under the name of *sulphuro-alkaline ointment*, and is composed of two parts of sublimed sulphur, one part of subcarbonate of potash, and eight parts of lard. The mean duration of treatment is twelve days; but it has the disadvantage of discoloring the clothes so that they cannot be restored.

More recently agents have been used to destroy the acarus, and in this way cure the disease more speedily. Dr. Hebra, of Vienna, found that a solution of common salt, of corrosive sublimate, of arsenic, of the sulphates of iron, and copper, and zinc, or a decoction of the leaves of tobacco, or hyosciamus, or belladonna, or hellebore, either black or white, would destroy the insect in from two to twenty hours. He prefers *Wilkinson's Ointment*, modified as follows:—prepared chalk ʒ iv.; sulphur and tar āā ʒ vj.; soft soap and lard āā ʒ xvj. M. Hebra considers the addition of the chalk of great importance in acting mechanically to break up the furrows.

The remedies used, of whatever kind, should be applied directly to the parts occupied by the insect, as they do not act by absorption. Dr. Hebra has the frictions made upon the extremities, where, according to his view, the acarus almost exclusively locates itself, and in occasional cases on parts to which he suspects it may have extended itself; and we have ourselves, for a long time past, limited the application of topical remedies to certain parts in preference. *Pihorel's* plan of treatment consisted in making, twice a day, frictions in the palms of the hands, with pulverized sulphuret of lime, mixed with a very small quantity of olive oil.

The problem to be resolved in the rational treatment of scabies is to cure quickly, with few or no complications, at as trifling an expense as possible, and without injuring the clothes. In the endeavor to accomplish this object, one of us, after a great number of trials of different remedies on a large scale, has selected the two following formulæ as those which have yielded the most satisfactory results:—

1. *Alcoholic Aromatic Lotions:*

Essence of peppermint.
" of rosemary.
" of lavender.
" of lemon āā 4 to 6 drops.
Alcohol, ... ʒ iss.
Weak infusion of thyme, ℥ quarts.

The mean duration of this treatment is eight days; it is a desirable plan in private practice, and causes no serious complications, but is too expensive for hospital use.

2. *Ioduretted Lotions.*

Iodide of sulphur.
Iodide of potassum āā 3 iss.
Water, ... 1 quart.

The mean duration of this plan is six days.

Whatever the lotion employed, it is necessary not only to wet the affected parts, but to prolong its application, so as to produce that kind of maceration which is required to destroy the insect.

Baths are useful auxiliaries to the treatment, and one should be taken at least every two days. Sulphur vapor baths are too fatiguing for the patient, and the mean duration of treatment is too long; but they often are useful aids to other means.

Accidental complications must be treated by appropriate means when they occur. As these are most usually produced by the agents used to destroy the acarus, nothing more is required than to suspend the use of such articles for the time.

Patients must also be kept by themselves, and their clothes disinfected; and after the treatment is finished, warm baths should be taken.*

* M. Bazin, physician of St. Louis Hospital, Paris, claims to have improved the treatment of itch so as to have shortened its duration to four days. The modification of treatment consists in having the patient rubbed from head to foot, and over the whole surface of the body, with the particular ointment which may be used, instead of confining the application to the wrists and elbows only. He says that friction has very great advantages over lotions and baths, and if it is only made upon parts covered with pimples and furrows that are visible, it will not cure those in whom the furrows are out of sight, and the acari in these will escape the action of the ointment. The treatment is to be commenced and concluded with a warm bath, the frictions to be made every six hours for forty-eight hours. He uses the ointment of Helmerick, and also the following:—℞ flowers of sulphur, ℥ ss.; common salt 3 j.; lard ℥ ij.—(*L'Abeille Méd.*, Nov. 3, 1850.)

Dr. J. H. Bennett, of Edinburgh, reports cases of scabies cured by inunction with lard alone, the parts being also kept covered with oiled silk, and thinks that the efficacy of sulphur ointment depends almost entirely upon the unctuous matter, which causes the death of the acarus by stopping up its respiratory pores.—(*Monthly Journal Med. Sc.* Jan., 1850.) Olive oil has also been used with similar results. Frequent lotions through the day, with a solution of chloride of lime (℥ j. to a pint of water), are preferred by one writer to all other means.

Emery gives the following recipe for an ointment used at the St. Louis Hospital:—℞ brown soap, ℥ j.; table salt, ℥ ss.; alcohol, 3 j.; vinegar 3 ij.; chloride of lime, 3 ss. He says that it causes no irritation, does not soil the clothes, has no unpleasant smell, cures in a short time, and is cheap.—(*Bulletin Génér de Thérap.*, Mai., 1836.)

The combination of sulphur with soap, of a kind and quality to suit the taste and the means of the patient, forms a convenient and effectual mode of applying that remedy. I have combined it with the common soft soap in dispensary practice with good effect.

M. Bazin says, that to put the clothes which the patient has been wearing into a hot oven is more sure to destroy the acarus than to wash them. H. D. B.

BULLÆ.

The diseases which belong to this order are characterized by elevations of the epidermis, sometimes of considerable magnitude, caused by the effusion of serum or a sero-purulent fluid. These tumors are called *bullæ* or blebs; they are of a round form, have a broad base, and vary in size from a pea to that of a goose-egg, which distinguishes them from the *vesiculæ*, the latter never appearing so large.

The eruptions which come under this denomination are two, *pemphigus* and *rupia*. Rupia has been classed by Bateman amongst the vesiculæ; but we agree with M. Biett, that it may be very appropriately placed under the head of bullæ. Analogous phenomena are sometimes observed in diseases foreign to this order, but their development is purely accidental. They are simple complications, the elementary characters of which are essentially different from those of the diseases under consideration. Thus, in herpes zona, some of the vesicles running together form genuine small bullæ; but the vesicles properly so called are much more numerous, and besides, all their characters are very distinct from those of the bullæ. The development of bullæ in erysipelas is also entirely accidental, that affection being also characterized by well-marked symptoms. Although the diseases belonging to this order may assume an acute form, they are more frequently chronic. They appear successively on every part of the body; they spread over a large surface, but rarely over the entire skin at the same time. They are generally confined to the extremities, most frequently to the lower. Their duration varies from a fortnight to several months. Sometimes they continue for an indefinite period.

Symptoms.—The invasion of these affections is frequently preceded by a certain degree of redness of the skin, but in many instances this phenomenon does not occur, and the bullæ or blebs appear suddenly without any precursory symptoms whatever. The cuticular elevations are small at first, but they gradually enlarge during the first twenty-four hours,

until they attain a considerable size. The bullæ are tense when they first appear; but as soon as the fluid thickens they become flaccid, as if only half filled. In all cases they burst sooner or later, the serum becomes effused on the skin, and they are succeeded by incrustations of variable thickness. The bullæ which are developed on the face are in general very small, they burst early, and are succeeded by crusts analogous to those of impetigo. In some cases the bullæ are succeeded by ulcerations, sometimes superficial, but more frequently deep-seated, as in rupia.

Causes.—The causes of these affections are very uncertain. They appear most frequently in persons of a broken-down constitution.

Diagnosis.—These diseases are generally easily recognised. The vesiculæ, which alone could be mistaken for them, may be distinguished by their smallness. The diagnosis is more difficult when the bullæ have burst, and are succeeded by thickish crusts. However, the peculiar characters of each will enable them to be distinguished at a glance, especially as the bullæ invariably leave marks after them. We have to depend chiefly on negative characters in these cases, in which considerable experience is necessary to form a correct diagnosis.

Prognosis.—The bullæ are sometimes dangerous, especially when they occur in aged persons, or in those of a broken-down constitution. In these cases they frequently accompany a chronic disease of some internal organ, particularly of the liver.

Treatment.—These affections occasionally require an antiphlogistic plan of treatment. Sometimes they require tonics, the preparations of iron, &c.; and lastly, particular attention should be paid for a considerable time after the disappearance of the disease to the patient's hygiéne.

PEMPHIGUS.

SYN.—*Febris bullosa; febris vesicularis; hydatis; Pompholix; Phlyctena; Bulla.*

A cutaneous affection has been described under the name of Pemphigus, characterized by the appearance, upon one or more regions of the body, of large bullæ, two inches or more in diameter, containing at first limpid serum, which soon becomes reddish. They are isolated, but numerous, and prolonged by successive eruptions, always terminating in slightly thickened crusts and superficial excoriations. Willan and Bateman have denied the existence of pemphigus as an acute

affection, but admit and describe its appearance in a chronic form under the name of pompholix, "an eruption of bullæ without surrounding inflammation and without fever." Gilibert has, however, in his excellent monograph, established the identity of pemphigus as a distinct affection, and M. Biett had long entertained a similar opinion. It may appear, therefore, in two forms, the acute and chronic. Acute pemphigus may be confined to a single region, but is generally so diffused as to occupy nearly the entire surface of the body. In these instances the bullæ are almost always separate from each other; we very rarely find them confluent.

Symptoms.—Sometimes the precursory symptoms are of a mild character, and consist merely in slight indisposition, accompanied with a smart itching of the skin, and slight acceleration of the pulse. In other cases the skin is dry and burning, there is much thirst, quick pulse, anorexia, and rigors. This state continues twenty-four to forty-eight hours, and sometimes even three days. The eruption then commences in the form of small red circular patches, which gradually increase, and become covered with bullæ. The latter are produced by the effusion of serum under the epidermis, over the whole or part of the inflamed base. Sometimes these red patches become immediately covered with bullæ, on other occasions they are not developed for several hours. In some instances the bullæ cover all the inflamed surface, and are then small, transparent, isolated tumors, varying in size from that of a pea to that of a filbert, and of a nearly rounded form. In other cases, on the contrary, the epidermis is not raised over the whole of the inflamed surface, but merely at the centre, and a little way round it. Thus we sometimes observe in a spot the size of a shilling a single bleb, not larger than a pea, whilst in others, on the contrary, an areola of one or two lines only surrounds the isolated tumor. There are also cases in which we find red patches here and there without any bullæ; but on passing the finger along the surface, a slight elevation is perceived, and the epidermis is easily detached by friction, in consequence of the subcuticular serous exudation. The red color of the areola is very bright for the first four days; the color of the patches that do not contain bullæ is much paler; in the interstices the skin remains perfectly sound. This redness has been denied altogether by some writers. Sometimes several of the bullæ unite and form a tumor, the size of a goose-egg.

When the bullæ have attained their full growth, they begin to fade, and the serous fluid becomes opaque. They sometimes burst within twenty-four or forty-eight hours. They

are replaced by small, thin, brownish incrustations, which begin to form before the redness disappears, or by small, dry, whitish lamellæ.

The eruption of acute pemphigus may present itself in two entirely distinct forms: the bullæ may appear successively, or may all come out at the same time, resembling in this respect the eruptive fevers.

The febrile symptoms which accompany this disease are sometimes so very slight, that the patient does not require to keep his bed. On other occasions they are exceedingly severe. We have seen a patient at the hospital of St. Louis in whom this affection was accompanied with severe gastro-intestinal irritation, pulmonary catarrh, ophthalmia, and inflammation of the urethra. The tongue was swollen, and the lips were covered with sordes. All these symptoms, together with the eruption, disappeared in the course of a month. The duration of acute pemphigus is ordinarily short, from one to three weeks. It sometimes affects children, when the symptoms are the same as the foregoing. The *Pemphigus infantilis*, or *P. gangrenosus* of nosologists, seems to us to belong more properly to *rupia escharotica*. M. Krauss has, however, established pretty clearly, in his Thesis "De Pemphigo Neonatorum," the existence of this disease; and we have recently seen a case, with M. Trousseau, in which the soles of the feet of an infant were covered with bullæ containing a sero-purulent fluid, and surrounded with a violet-colored areola. The infant was otherwise perfectly healthy. It frequently appears in lying-in hospitals, when it has often been mistaken for a syphilitic affection.*

Pompholix solitarius of Willan appears to be a variety of acute pemphigus. The appearance of the bullæ is preceded by a pricking sensation; their course is rapid, and several ounces of serum are speedily effused under the epidermis. The bulla (only one appears at a time) opens in the course of forty-eight hours, and leaves a slight excoriation. One or two days afterwards another bleb forms near the first, and pursues the same course. They frequently reappear twice or thrice in this manner, so that the disease may be prolonged for eight or ten days. This variety may also exist in a chronic form. It is, however, an exceedingly rare affection.

Chronic pemphigus (*Pompholix diutinus* of Willan) is a

* Our authors say, in the edition of their work in 1847, that they have met with several cases of this disease, respecting the true character of which they were for a long time in doubt, and that recent observations have led them to coincide with Prof. P. Dubois in regarding the pemphigus of new-born children as a rare and serious form of congenital syphilis. H. D. B.

more common disease than the acute form, and appears more frequently in adults and in old men than in women. This affection often spreads over the whole body; at other times it is confined to a small surface. Febrile symptoms never supervene, as in the acute form, unless the eruption becomes very much extended and prolonged. A few days before the bullæ appear, the patient feels a slight degree of lassitude, languor, and pains in the limbs. A number of small red spots, accompanied with slight itching, then supervene. In the centre of each little patch the epidermis becomes elevated. The base of this cuticular elevation gradually extends so as to form in the course of a few hours an irregularly-shaped bulla, the size of a filbert, or even of a walnut. At the end of two or three days the bullæ are as large as an egg, and sometimes larger. Owing either to their distended state, or the movements of the patient, some of these burst, and the serum is effused over the skin. The epidermis shrivels and is corrugated, or else it becomes partly detached, folds upon itself, and exposes an inflamed and slightly excoriated surface, around which the skin becomes puckered, and upon which there takes place a slight exfoliation.

Towards the third or fourth day, according as they lose their transparency, and as the serum becomes reddish, the bullæ which have not burst shrivel up. The epidermis assumes a whitish tint first, then becomes opaque, and finally terminates in small, flat, brownish incrustations. New bullæ form close to the old ones, and pursue the same course, so that we may observe at the same time bullæ filled and distended with semi-transparent serum, laminated crusts, and irregularly formed red patches, slightly excoriated, and of variable size. Moreover, the skin of the patient, in whom all these various phases of the disease, from the formation of the bullæ to their complete disappearance, are developed, presents a very peculiar and remarkable appearance. Such is the ordinary course of chronic pemphigus, which may thus be prolonged for months.

In some rare cases, pemphigus spreads over the whole surface of the skin at the same time. The bullæ then coalesce, the contained fluid thickens, and becomes purulent; and presently the whole body is covered with yellow crusts, which have been mistaken for those of *impetigo*. These crusts are not thick, and present certain peculiarities both in their form and in their extent, which denote that they have proceeded from bullæ. Some of these incrustations, extremely thin, seem to be convex at the centre, and are shrivelled and wrinkled at the circumference. This variety

usually appears on the face, which is not a common situation of pemphigus. The first bullæ are in some cases preceded by red, circular spots, as in the acute form, which will not occur with the succeeding eruptions, and sometimes the reverse of this takes place; while, in other cases, successive eruptions may have erythematous borders.*

The disease is sometimes confined to a certain point. We have seen in M. Biett's ward a man, thirty years of age, who had been from his infancy affected with pemphigus, sometimes in one part, sometimes in another, which produced a purple-red color on the lower part of the limbs, not unlike that which appears in individuals affected with indolent ulcerations of those parts. It was continually developed in this situation for several years, and the bullæ varied from the size of a small almond to that of a large nut: they sometimes attained the size of the palm of the hand, when the epidermis would peel off, and expose a large unhealthy-looking excoriated surface, which would seem difficult to heal; but they would entirely heal in a day or two, when new bullæ would form, and pursue the same course as the former.

In some severe cases the patient is confined to bed, but there is rarely any fever. Pemphigus may coexist with many different eruptions, and most frequently with *herpes* and *prurigo*. In the latter (*Pompholix pruriginosus* of Willan) the patient experiences severe itching. Chronic pemphigus may be complicated with various chronic diseases of the

* The more common form in which pemphigus is met with, is probably one which forms the connecting link between the *acute* and *chronic* forms, and which Corrigan (*Cyclop. Prac. Med.*) proposes to call sub-acute. This variety he describes as corresponding with the acute form in being attended by fever; and agreeing with the chronic in presenting, not simultaneous, but successive eruptions of bullæ. He says, "the accessions of febrile symptoms are irregular, and with each accession a new crop of bullæ appears, the whole attack usually running its course within a few weeks." This corresponds with my experience in this disease, which is far from being of frequent occurrence amongst us.

M. Cazenave speaks of a variety of pemphigus, in another place, which is intermediate between the form in which the bullæ appear successively, and that in which they are continuous; a form which constitutes a confluent eruption, appearing sometimes at intervals, and sometimes continuously, attacking the whole surface of the body. The bullæ are flattened, and contain an opaque serum, which hardly raises the epidermis, and soon hardens into yellowish, scabby lamellæ. The eruptions succeed each other so rapidly that the epidermis not being in a condition to form new bullæ, the disease is reduced to the secretion of a liquid, which dries under the form of large scales. The patient exhales from every part of the surface a dead and sickening odor, and is soon attacked with œdema, diarrhœa, serous effusions, or chronic enteritis, and often dies.

In some rare cases of pemphigus, several bullæ partially run together so as to detach the epidermis over a large extent, and when the fluid is discharged from them, present the appearance of a part denuded by a blister.—(*Gaz. des Hôp.*, Oct. 1850.) H. D. B.

viscera. It is evident, from the foregoing history, that the duration of pemphigus is by no means determinate. It varies from one, two, or three weeks, to as many months and years, or it may be prolonged to an indefinite period. It often appears in summer and disappears towards the end of autumn. Pemphigus usually terminates favorably; but it sometimes proves fatal, which is generally the result of some severe complication. It often, for example, supervenes on general or local dropsy, or on chronic inflammation of the digestive organs.

Autopsy.—We have had many opportunities of making post mortem examinations, at the Hospital of St. Louis, of persons who died with this affection, and have never met with those blebs or bullæ which have been alleged to exist on the mucous membranes, and particularly on that of the pharynx. We have generally, on the contrary, found these membranes pale, and an effusion of serum in the chest. We have also frequently observed the fatty liver in those cases; and M. Biett has likewise met with this lesion coexisting with pemphigus.

Causes.—Pemphigus may attack persons of all ages, but especially adults and old people; both sexes are liable to it, but males much more than females. Some persons are attacked frequently during life, at different intervals. In other cases chronic pemphigus may be prolonged by successive eruptions for an indefinite period. In some instances it appears to be endemic, or, at least, it attacks a number of individuals at the same time. Acute pemphigus frequently appears during the summer, in persons who have been exposed to the sun's rays for some time. Dentition, change of food, and excess, appear to promote the disease. This variety attacks young persons only. Chronic pemphigus affects old people, and particularly persons of a broken-down constitution. Poor and scanty food, over-exertion, low and damp dwellings, evidently predispose to the disease. It has been observed to follow an attack of rheumatism or inflammation of the bowels.*

Diagnosis.—The presence of isolated bullæ, and the thin

* Cazenave speaks particularly of cold and moisture, and especially when connected with immersion for some time in water, as one of the causes of acute pemphigus; also, working in damp places, keeping the arms immersed in cold water, &c.

Chronic pemphigus, he says, occurs more frequently in women than in men, the contrary of which is true with respect to acute pemphigus. It is also caused by moral emotions, and is sometimes connected with menstrual derangement, especially suppression of the catamenial discharge; and often takes the place of hæmorrhages of different kinds. It also occurs in those who have discontinued the bad habit of being bled from time to time. H. D. B.

laminated crusts which cover the whole or part of the diseased surface, will always prevent pemphigus from being confounded with other cutaneous affections. It is distinguishable from *rupia simplex* on account of the bullæ of the latter being exceedingly few, and terminating in ulcerations, and in thick prominent scabs. In *ecthyma* the epidermis is sometimes raised to a certain extent by a collection of pus, and thus forms a kind of bulla; but in this case the fluid is purulent and not serous; the apex of the cuticular elevation is brownish; and, besides, pustules of ecthyma at an earlier stage will be found on some other part of the body. In *herpes* the vesicles are always collected in groups upon a red and inflamed surface, whilst the bullæ of pemphigus are isolated, and are generally free from surrounding inflammation. However, in some rare instances the bullæ of acute pemphigus are small and agglomerated, here and there, and the disease has a considerable resemblance to clusters of *herpes phlyctenodes;* but then, on the other hand, isolated bullæ, with their distinctive characters, are always discernible; and, besides, these groups are formed by an agglomeration of bullæ, which, although small, are always more voluminous than the vesicles which constitute those of herpes.

Those bullæ which appear during the progress of *erysipelas* are merely accidental, and the actual presence of that disease will distinguish them from those of pemphigus. In some cases the incrustations of pemphigus may be mistaken for those of *impetigo*, but if they form a sort of general envelope, as before observed, they can scarcely be mistaken; for impetigo is usually confined to a limited surface, and rarely ever extends over the whole body. Besides, the crusts of the pustular diseases are rough, thick, and indented; whilst the others are thin, frequently elevated at the centre, and sometimes wrinkled. In general they assume the form and size of the bullæ to which they succeed. The red patches remaining after pemphigus, present certain peculiarities which are easily perceived by persons accustomed to see this eruption. They are of a dark red color; separated from each other, of an irregular form, of variable size, and occasionally giving rise to slight cuticular exfoliation.

Prognosis.—The prognosis of *acute pemphigus*, if unattended with any serious complication, is always favorable. That of *chronic pemphigus* varies according to the constitution of the patient; it is less favorable in proportion as the eruption is more extended and frequently developed, and the patient enfeebled by age, by poverty, or by dissipation. It may be stated, generally, that pemphigus is always indicative

of a bad state of constitution. Its severity usually corresponds with that of the chronic diseases with which it coexists. We are acquainted with no facts in support of the opinion which has been advanced, that it sometimes appears as a favorable crisis in the course of some dangerous diseases, as pneumonia and malignant fever.

Treatment.—Acute pemphigus is a mild disease, and requires but simple treatment. However, if inflammatory symptoms should appear, and if the eruption is diffused, the warm bath, bleeding, or leeches to the anus may be employed with advantage. In *chronic pemphigus* the treatment should also be antiphlogistic at the commencement, but care should be taken not to push it too far; warm baths, acidulated drinks, and at a more advanced period, alkaline baths, are the most appropriate remedial measures at this period. At the same time, if there be much pain, emollient applications and opiates ought to be employed, especially if there is much insomnolency, diarrhœa, or dull pain in the abdomen.*

If an obstinate cough, bloody sputa, and other severe symptoms supervene, bleeding must be had recourse to. But it is necessary to bear in mind that chronic pemphigus is not a purely inflammatory affection, and if, notwithstanding the administration of the remedies already indicated, the eruption should continue to reappear, the strength of the patient must be recruited with tonics, nourishing food, &c. The decoction of bark, with half a drachm of sulphuric acid to the pint, or the preparations of iron, will be found very efficacious. These remedies are often required in young subjects as well as in the old, where they will be found equally efficacious. They should be regulated according to the constitution and condition of the patient.†

* In the last edition of their work, our authors say that warm baths are but seldom useful in chronic pemphigus, and that in some cases they should not be taken. H. D. B.

† Pemphigus will often be found connected with inflammation or irritation of some portion of the mucous surfaces, and must be treated accordingly. In the cases of the *subacute* kind which I have seen, this connection has been very evident. In this, as well as in the chronic form, strict attention to diet has been necessary, both in effecting and in establishing the cure. Tonics are also necessary after the febrile symptoms have disappeared.

When pemphigus follows the cessation of periodical hæmorrhages, M. Cazenave advises (*Gaz. des H p.*, Oct., 1850) to give tonics, instead of abstracting blood, as might seem to some the more rational course. In some cases, the whole attention must be directed to the general condition of the patient, and the complications.

M. Trousseau says that he does not regard pemphigus as a disease of the skin; but that its local manifestations require to be treated, because reaction may take place.

He says that general pemphigus in adults is almost always fatal, because the

RUPIA.

SYN.—*Ulcus atonicum.*

Rupia is characterized by isolated, flattened bullæ, of variable size, filled with a fluid frequently serous, frequently purulent, sometimes blackish, which are succeeded by thick scabs and ulcerations of more or less extent. This affection has a great analogy to ecthyma, of which in many cases it appears to be a variety, as indicated by Bateman and Biett. The lower extremities are more frequently affected than any other parts. It may, however, appear on the loins, the buttocks, the upper extremities, and elsewhere. Rupia generally produces but few bullæ, which are widely separated from each other. It pursues a chronic course, and its duration varies from a fortnight to several months. There are three varieties of rupia described by writers, which differ from each other, however, more in degree than in kind.

1. *Rupia simplex.*—This form chiefly attacks persons who are ill-fed, ill-clothed, and who have suffered from privation of every kind. It often appears amongst the sequelæ of small-pox, measles, and scarlatina. It appears in the form of bullæ, about the size of a shilling, round, flattened, and developed without any previous inflammation. These bullæ contain at first a serous fluid, which subsequently becomes opaque and purulent. They soon shrink, the fluid concretes, and forms rough, brownish crusts, thicker at the centre than at the circumference, where they are attached to the epidermis, which is slightly elevated at that point. A slight ulceration of the skin exists beneath the scabs. These fall off in a few days, and cicatrization speedily ensues; but in some

cause is fatal, and that pemphigus is the expression of a more grave cachexia than any other cachexia.

Tonics and stimulants are required internally, and sometimes quinine. Locally he recommends baths of corrosive sublimate, or alkaline baths. (*L'Abéille. Med.*, Avr. 1848, p. 82.)

As a general rule, the bullæ should *not* be opened, and warm and moist applications to them should be avoided. Should they burst, either spontaneously or by accident, some soothing application must be made to allay the irritation, and especially to protect the excoriated surfaces from the air.

Our authors add in their last edition that liquid and even fatty topical applications are not of much use, and that they have for a long time simply sprinkled the affected surfaces with a mixture of powdered starch and tannin.

The free application of nitrate of silver to the surface, after detaching the cuticle with scissors, is said by Mr. Cottingham to have succeeded in one case, after a variety of other applications had failed. (*Lond. Lancet* (Amer. Rep.), Mar. 1850.) H. D. B.

cases circular-shaped ulcers are established, which continue for several days, and are incessantly renewed. A livid red color remains after cicatrization has been completed. Rupia simplex frequently accompanies those cases of ecthyma where there is considerable suppuration, and in which the epidermis is raised to a certain extent, by thin liquid pus, forming genuine bullæ. The largest of these are soon covered with a thick crust, raised at the centre, and depressed at the edges, which are continuous with the raised epidermis.

2. *Rupia prominens.* The second variety differs from rupia simplex by the larger size of the bullæ, the greater depth of the ulceration, and the thickness of the crusts. It has a close resemblance to that form of chronic ecthyma described by Willan under the name of *Ecthyma cachecticum*, and most frequently attacks individuals of a broken-down constitution. Its usual seat is the lower extremities. It often occupies but a single spot, in other cases several patches; but the bullæ are always isolated and distinct. This variety commences with a circumscribed inflammation of the skin, on which the bullæ are subsequently developed. The latter sometimes form rapidly, and are filled with a serous fluid, but, in general, the epidermis is raised gradually, not with a citron-coloured serum, but with a thick, blackish fluid. In some instances resolution may occur, and the inflammation disappear, without the formation of scabs. In general the serous fluid concretes speedily, and forms rough, dark-colored scabs, the thickness and extent of which, although at first considerable, goes on gradually increasing. The circumference of this scab is surrounded by an inflammatory areola, some lines broad, upon which the epidermis is again raised; a new incrustation is formed, and adds to the extent of the former, at the same time raising that concretion above it. The red areola is again developed slowly round the circumference, the epidermis rises, and by these successive additions the primitive scab becomes greatly enlarged and thickened; and finally it ceases to extend, after a certain period varying from two days to a week. The scab is now broad and conical, and the superadded layers may be seen distinctly round the circumference. It is of a reddish-brown color, and is not unlike in appearance to a small oyster-shell. In other cases it is conical, and resembles the shells of certain mollusca which adhere to rocks. This scab continues sometimes for a long time, and if it be easily detached in some cases, it is with much difficulty in others. The exposed surface is more or less ulcerated, according to the duration of the scab. Sometimes a new scab quickly forms; at other times, a round, unhealthy-

looking ulceration of considerable depth is established, which it is very difficult to heal, especially in old subjects. Its edges are of a livid red color, and tumefied; the surface is pale, and bleeds on the slightest pressure, and its circumference is sometimes larger than that of a crown-piece. After a certain period, cicatrization takes place, and a purple patch remains, which slowly disappears.

3. *Rupia escharotica.*—The third variety appears to be the same affection as that described by other writers under the name of *pemphigus gangrenosus.* This variety only affects infants, from the period of birth up to that of the first dentition. A cachectic state of body, resulting from bad nourishment, exposure to cold, or some anterior disease, seem to be the exciting causes. The loins, the lower extremities, the neck, the upper part of the chest, the abdomen, and the scrotum, are the usual seats of this disease. It commences with slightly prominent livid patches, upon which the epidermis is soon raised here and there by an effusion of serum. These elevations increase, and form large flattened and irregularly-shaped bullæ. The latter are surrounded with a red or violet-colored areola. The serum thickens, and assumes a blackish tint. The bullæ soon break, and ulcerated surfaces appear beneath, spreading both in depth and in width; their edges are red and inflamed, and they are covered with fœtid, unhealthy pus. When these disappear, new bullæ form, and pursue the same course. The infant suffers from acute pain, much fever, and insomnolency. When the disease assumes an intense form, death may ensue in the course of one or two weeks. When it does not terminate fatally, the ulcerations are very long in healing.

Diagnosis.—*Pemphigus* and *ecthyma* are the diseases most frequently confounded with rupia. The latter, however, differs from *pemphigus* in this respect, that the bullæ rarely contain a transparent serous fluid, but rather a sanious liquid; and besides, the form of the scab, which is thick, rough, surrounded from the beginning with an inflammatory areola, on which the epidermis is raised, and its oyster-shell appearance, together with the consecutive ulcerations of rupia, are sufficient to distinguish it from *pemphigus.* *Ecthyma,* as we have observed, has a considerable resemblance to rupia; they are frequently seen existing close by each other in the same individual. The first variety of rupia does not resemble ecthyma so much as the others. The resemblance only exists when the cuticle is raised by a quantity of pus into the form of a true bulla. We have, for instance, frequently seen at the hospital of St. Louis an ecthymatous eruption, in which a

great number of pustules were set close together, the epidermis was raised in several places to the extent of a shilling, genuine bullæ, filled with purulent fluid, were developed, which terminated in the characteristic scabs of rupia. These scabs, however, only formed on the largest of the accidental bullæ. In admitting the great analogy that exists between these two diseases, it is necessary to observe, that the peculiar character of the scab, and the deep and rebellious ulcerations of rupia, establish a distinction between them, frequently very well marked, and sufficient to admit a separate description of each, which are otherwise produced by the same causes.

Prognosis.—If we except *R. escharotica*, rupia is not a severe disease. The age of the patient, the state of his health, and the extent of the ulcerations, will be our guides in forming an opinion as to the duration of the eruption.

Treatment.—The treatment of rupia ordinarily consists in restoring the health of the patient, which is generally debilitated, by good nourishing food; tepid and alkaline baths, when the ulcers are cicatrizing slowly; or, still better in those instances, emollient applications, or lotions of wine with honey or aromatics; or, finally, slight cauterizations with the nitrate of silver. This treatment will not be sufficient in the large round ulcerations which succeed *Rupia prominens*. Although the emollients will appease the pain, they will not reduce the surrounding inflammation, nor hasten the cicatrization. Adhesive straps, so useful in rebellious ulcers, are needed here. It will then be necessary to modify the condition of the diseased surface, and caustics will produce this result better than any other remedies. It will sometimes be necessary to cauterize the ulcerated surface deeply with the nitrate of silver, or still better, to wash it with nitric or hydrochloric acid, diluted with water. And in cases where these remedies will not produce cicatrization, the parts should be cauterized with the concentrated acids, or with the acid nitrate of mercury. An ointment of the proto-ioduret, or the deuto-ioduret of mercury, is often very efficacious. In all cases, repose, and the horizontal position when the disease is seated on the legs, are indispensably necessary. In *R. escharotica* it is necessary to continue the emollients at least as long as the fever continues. Quinine mixtures, wine, &c., so frequently administered in these cases, do not appear to be very efficacious. It is, therefore, from amongst the anodyne and emollient remedies that we should select the external applications.*

* Nourishing diet, fresh air, and warm baths constitute the basis of the treatment of most cases of rupia. Warm salt water baths are frequently very useful. The

hydriodate of potash internally often acts very favorably—in other cases, quinine, or some preparation of iron, will answer better.

As a *local* application, Rayer speaks very highly of cream of tartar, sprinkled on the ulcers. Wilson cured an unhealthy ulcer on the arm by injecting a strong solution of alum under its edges. When on the lower extremities, bandaging is of great importance.

In the early stage the bullæ may be opened, and their contents discharged, the surfaces then dressed with simple cerate, or some narcotic ointment, or with cloths wet with some slightly stimulant or astringent lotion. H. D. B.

PUSTULÆ.

The diseases ranged under this order are characterized by small circumscribed cuticular elevations, formed by the effusion of a purulent fluid between the cuticle and cutis vera. These small tumors are called *pustules*. The cutaneous diseases which are characterized by a pustular eruption, are variola, vaccinia, ecthyma, impetigo, acne, sycosis, porrigo, and glanders.* Some of these affections, as variola, and sometimes ecthyma, appear at the same time over the whole cutaneous surface; whilst others, as vaccinia and impetigo, are partial; and others again, as acne, sycosis, and porrigo, are confined to certain defined limits, as is also the case with vaccinia, which is only developed where the contagious virus has been actually applied; but no part of the body is exempt from an eruption of pustules.

The progress of these diseases may be acute or chronic, but each pustule terminates individually in from two days to a week. The essentially acute pustular affections are variola and vaccinia. Ecthyma is most frequently acute, but it may sometimes become chronic. The duration of these diseases is from one to three weeks. The chronic pustular affections are porrigo, sycosis, impetigo, and acne. Their duration is uncertain, and they are often prolonged for an indefinite period. Most of them, however, especially impetigo, may assume an acute form.

The pustules of these diseases present some peculiarities which are worthy attention. They are generally *phlyzacious* in the essentially acute affections, and *psydracious* in the chronic varieties. The larger, or phlyzacious pustules, have an inflamed base, as their name indicates. The absence of surrounding inflammation characterizes the psydracious pustules, which are also smaller than the former. Porrigo, as we shall presently see, is characterized by distinct pustules, called *favi*; and finally another order of pustules, the *achores*,

* Added by translator. H. D. B.

characterize two eruptions of the head and face, which have been described as varieties of porrigo. The pustules are almost always of an umbilicated form in *variola* and *vaccinia*, and even frequently in ecthyma. A small cicatrix, more or less distinct, usually remains after variola and vaccinia. In those varieties which pursue an indefinite course, the pustules are often scattered irregularly over a surface of variable extent; sometimes they are united in clusters, with determinate characters.

The scabs which succeed the pustules have certain peculiarities, according to the nature of the disease, which require considerable attention. In *porrigo* they are yellow, circular, and have a depression in the centre, which remains for a considerable time. After once disappearing they are not reproduced, unless by the formation of new favous pustules. In *impetigo*, the scabs, which are generally thick and rough, are produced by the concretion of the sero-purulent fluid, which is effused over the inflamed surface. They are of a yellowish green or brown color, and are often replaced by others, developed in the same way. The scabs which succeed the pustules of *sycosis* and *acne* are less characteristic, and do not continue so long. In these cases there is often a certain degree of chronic inflammation where the pustules appear, which produces those hard indurations commonly called *tubercles*.

The chronic pustular eruptions rarely leave cicatrices behind; but the skin generally remains red for some time after their disappearance. These diseases may be complicated with each other, each pursuing its own peculiar course. This remark applies also to variola and vaccinia, although it has been argued that these affections never coexist in the same individual. The pustular diseases are also often complicated with exanthematous and vesicular affections. Variola is often accompanied with severe inflammation of some of the internal organs, which rarely occurs in any of the other varieties.

Causes.—Variola and vaccinia and the two forms of equinia or glanders are only produced by contagion. Porrigo favosa, and P. scutulata, although they may appear spontaneously, are generally propagated by contagion. The other pustular diseases depend chiefly on some unknown internal cause.

Diagnosis.—The presence of small elevations filled with pus, is sufficient to distinguish the pustular affections from all other cutaneous diseases. The vesiculæ, it is true, contain at a certain period of their formation a thick sero-purulent fluid; but it is altogether consecutive of the transparent serous fluid,

whilst the pustular eruptions contain true pus from the beginning; besides, the physical character of this fluid, which is thick and yellow, will readily distinguish it from the opaque-colored serum which the vesicles contain just before their disappearance. There are, no doubt, cases in which their distinctive characters are not so well marked, as for example in vaccinia, where a pustule succeeds a perfect vesicle; but in general the distinction is easily established. The coppery color of syphilitic pustules, together with other peculiarities, is sufficient to distinguish true pustular eruptions from those resulting from syphilis.

Prognosis.—With the exception of variola, the pustular diseases, although very troublesome, never terminate fatally. The prognosis is not so favorable when the disease has existed for a long time, and has resisted a variety of curative remedies.

Treatment.—In the acute varieties, the treatment should be decidedly antiphlogistic; but it is difficult to lay down in a general manner that which should be adopted when these eruptions assume a chronic form. Sometimes very simple measures will suffice, but in general recourse must be had to more energetic remedies, with the view of modifying or altering the condition of the skin.

VARIOLA.

Syn.—Small-pox.—*Febris variolosa.*

Variola is a contagious inflammatory disease, characterized by an eruption of tolerably large phlyzacious pustules, most frequently umbilicated, and always ushered in by considerable constitutional disturbance. It is divided into *natural* and *inoculated*, according as it is communicated by exposure to the variolous infection, or results from the insertion of the virus in some part of the system; and into two species, the *distinct* and *confluent*, implying that in the former the pustules are perfectly distinct from each other, and that in the latter they coalesce. It is also called *coherent*, when the pustules, without running together, only touch by their edges. But these last divisions are very arbitrary; for the eruption is often confluent on one part, as on the face, while it is distinct on other parts. There is also a great variety of intermediate shades between the mildest form of distinct variola and the most severe form of the confluent.

It is also divided into *primary* and *secondary*, an attack of the latter being almost always milder than of the former.

Symptoms.—1. *Variola discreta.* The course or progress

of small-pox, whether discrete or confluent, has been divided into five periods—incubation, invasion, eruption, suppuration, desiccation. The period of *incubation* extends from the date of the exposure to, and reception of, the contagion, to that at which the morbid symptoms begin to appear; and lasts from six to twenty days. It is marked by no visible symptom, the general health remaining apparently good. The violence of the disease has been supposed to be the greater in proportion to the shortness of this period. The *invasion* of the distinct form of the disease usually commences with general constitutional disturbance, rigors, depression, lassitude, pains in the limbs, and especially in the back, hot skin, quick pulse, headache, thirst, nausea, and often vomiting, pain in the epigastrium. These symptoms continue for three or four days, and are then accompanied with cough, a tendency to perspiration and sleep, in adults; and in children, drowsiness, and sometimes coma and even convulsions. The tongue is intensely red, and the pulse greatly accelerated. In the confluent form, these symptoms are still more severe. The lips and tongue are dry, and covered with black sordes, and there is great prostration. There is sometimes diarrhœa, but more frequently obstinate constipation.

The *eruption* appears about the third or fourth day, first on the face; on the hands in some rare cases. It then spreads to the neck, arms, and the rest of the body, in the course of twenty-four hours. Sometimes it is preceded by an erythematous or roseolous rash, and manifests itself by small red spots not unlike small papulæ. During the period of eruption, the skin is hot and shining; there is a general exacerbation of the symptoms at the commencement of this process, and they generally subside when it is completed. A period of four or five days intervenes between the process of eruption and that of suppuration, during which the small red spots increase in volume, and present a peculiar cupped or umbilicated depression in the centre. On examining the skin, about the second day of the eruption, a multitude of small pointed elevations may be seen, with red and inflamed bases, more of a vesicular than of a papular character, although nothing flows from them when punctured. They are, in point of fact, the result of an effusion of semi-transparent coagulable lymph, that subsequently concretes, and forms a circular disc, which is attached to the cutis vera. At this period most of these elevations are acuminated; but some are already depressed in the centre. After the third day, the central depression becomes more and more marked, up to the period of suppuration. At this stage the pustules are of a

whitish color, and are surrounded with a light red areola. The pulse is now full and regular; very often there are several pustules on the surface of the tongue, and sometimes in the pharynx; there is also some difficulty in swallowing, and often slight cough. When the disease is distinct elsewhere, it may be confluent on the face, in the event of which the latter becomes red and swollen as if from erysipelas: the central depression is rarely seen. At the same time, whitish pustules with central depression cover the limbs; but they are usually less confluent on the body. The tongue is also covered with pustules, which often extend to the pharynx. The eyelids also become the seat of the eruption, and a painful acute form of ophthalmia, often ending in the destruction of vision, supervenes. Coryza and cough, in a large proportion of cases, indicate a similar eruption in the nasal passages and the trachea.

Suppuration begins between the fifth and seventh days after the appearance of the eruption, and terminates in three or four days. It is accompanied with a renewal of the febrile symptoms, and with a general swelling of the integuments, more marked about the face and hands than elsewhere. As the secretion of pus increases, the pustules lose their umbilicated appearance, assume a spherical shape, and acquire a yellow and in some instances a blackish color. Suppuration generally commences on the face first; reaching the hands and feet last, where the thickness of the epidermis keeps them from opening the longest. A small-pox pustule opened at the period of maturity, contains a small quantity of yellow pus, and at the base may be perceived a whitish umbilicated disc, presenting a perfect resemblance to the appearance of the pustule previously to the commencement of suppuration. The pustules do not remain long in a state of suppuration. They burst in the course of a day or two, and are replaced by dark-colored crusts or scabs. The process of suppuration is usually accompanied with much fever, tumefaction of the hands and face, and ptyalism. The swelling of the face usually commences about the fifth or sixth day of the eruption, at the same time with the secondary fever. The eyelids, lips, and nose generally swell before the other parts, and the eyelids are sometimes closed for several days. The hands swell about the same time as the face, and the swelling of both diminishes about the eleventh or twelfth day of the eruption, when the suppuration is finished.

Ptyalism sometimes occurs at the time of the eruption, but generally not until from three to seven days afterwards, and varies in severity in different cases.

Besides the secondary fever, severe diarrhœa, difficulty of breathing, and coma often occur during the period of suppuration.

Desiccation commonly commences at the face, and this region is frequently covered with an uninterrupted incrustation, when the pustules are only forming on the limbs. In *variola discreta* the pustules burst, and the pus escapes and concretes into a small, slightly-thickened scab, which preserves the form of the pustule. In *variola confluens*, the scabs form on the face about the eighth or ninth day of the disease; the features are masked by a thick brownish incrustation, which falls off from the fifth to the fifteenth day from the date of its formation, and is replaced by furfuraceous scaly crusts, which are frequently renewed. During this period the patient emits a peculiar faint and disagreeable odor, and the linen is soiled by the exudation of pus from various parts of the body. There is a considerable degree of itching present, which induces the patient to scratch himself, until deep and painful excoriations sometimes supervene. When the scabs are completely detached, deep red stains are visible beneath, which disappear slowly, and according as this red color diminishes, the cicatrices, or pits, become more and more apparent, and usually continue for the remainder of life. Such is the ordinary course of variola. The progress of this disease is, however, subject to some irregularities, and as a general rule, it commences and terminates on the face earlier than on any other part of the body.

Small-pox is greatly modified by being *inoculated*. When inoculation has been performed, a slight degree of redness is discovered on the third day around the puncture by which the virus was inserted in the skin. A slight circumscribed induration may also be detected in this point on this day, and especially on the following day, by passing the fingers over it. The redness is much deeper on the fifth day, and on the sixth the epidermis appears raised by the effusion of serous fluid under it, and at the same time a depression is visible in the centre. On the seventh, the superficial lymphatic vessels in the neighborhood of the puncture appear inflamed, the movements of the arm become painful, and before the tenth day the usual symptoms of infection are manifested. The initiatory phenomena are nearly the same as those of natural small-pox. Desiccation commences about the twelfth or fifteenth day from the period of inoculation; crusts or scabs form, and fall off about the twentieth or twenty-fifth day, leaving an indelible cicatrix behind. Variola, especially when confluent, may be attended by many serious symptoms.

The *invasion* may be attended by violent chills, burning heat of skin, and also by severe pain in the head and in the epigastric region. There may be also obstinate nausea and vomiting, and severe pains in the loins and sides, and also in the limbs.

Deep stupor, or violent delirium, and convulsions, may also be present, and the case may prove fatal before the eruption is developed.

The progress of variola may also be complicated with a number of diseases, especially with congestion of the different internal organs, or with hæmorrhage; as hæmoptysis, epistaxis, hæmaturia. Congestion of the brain, but particularly of the lungs, is a frequent occurrence; hence we so often meet with bronchitis, pulmonary apoplexy, pneumonia, pleurisy, and œdema of the lungs during the period of the eruption of small-pox. In some cases the congestion is confined to the skin, which is indicated by the presence of petechiæ. Severe ophthalmia is also very common about this time. Croup is fortunately much more rare.

Death occurs more frequently during the period of *suppuration* than at any other stage of the eruption; but generally, in such cases, free suppuration does not take place. The disease advances with frightful rapidity, and dissolution may supervene in the course of a few hours, or even in a few minutes, without any appreciable cause. Death has been attributed in these cases to suffocation produced by the bursting of the pustules into the larynx. Salivation may be very troublesome at this period of the eruption, and may be accompanied by cough, and by considerable difficulty in swallowing. Diarrhœa, especially when it occurs in children, is far from being a bad omen at the period of suppuration, unless very severe.

During the period of *desquamation* the complications are of a much milder character. This stage is often complicated with pustules of *ecthyma*, small subcutaneous phlegmonous tubercles, and with the bullæ of *rupia*. Amongst the sequelæ of small-pox, we may mention gastro-intestinal inflammation, bronchitis, chronic ophthalmia, deafness, blindness, and even the development of pulmonary tubercles. These complications occur in young and vigorous subjects, as well as in persons broken down by age or dissipation, and the causes which influence their development are by no means clearly understood.

Post-mortem Appearances.—The most common pathological lesions observed in subjects dead of small-pox, are various engorgements of the cerebral and thoracic organs, pustules

in the mouth, pharynx, œsophagus, and even in the larynx and trachea. The stomach and the intestines, with the exception of the rectum, are rarely affected. It is necessary to be careful not to mistake morbid enlargement of the follicles for variolous pustules of the intestinal mucous membrane; especially as the enlarged follicles, when opened, present a similar depression in the centre, like the pustules of variola. When death occurs before suppuration is well established, variolous pustules are easily found on the different parts of the mucous membrane already mentioned. The epithelium is afterwards detached, and small circular spots, red in the centre, and without elevation, are all that will be seen. We have never observed, amongst the numerous variolous bodies we have had the opportunity of examining after death, pustules fully distended with pus on the mucous membranes; and it appears to us that the extreme thinness of the epithelium of the larynx and trachea would prevent, by its early rupture, any great accumulation of pus under that membrane, and therefore these instances of sudden death above mentioned could not be owing to this cause.

The internal surface of the stomach frequently presents an injected, dotted appearance; that of the intestines is more rarely injected. The heart is generally flaccid and gorged with black blood, as also are the lungs. The aorta is stained, either in patches or continuously, for some distance. The pustules of the skin, which were violet-colored during life, become pale after death, and on examining their anatomical structure from without inwards, before losing their umbilicated form, the following appearances may be observed: 1. The cuticle preserves its natural consistence, and may easily be raised, leaving beneath a smooth whitish surface, with raised edges and depressed centre. 2. A small umbilicated disc, formed by a whitish exudation from the inflamed surface, occupies the place assigned by anatomists to the *corps muqueux*, and seems to be continuous with the subtegumentary tissue, when first developed; at a later period, however, it becomes easily detached. 3. Beneath this disc the surface will be found red, and frequently moistened with pus; and when examined at a more advanced period of the disease, there will be a thick and yellow pus.

Causes.—Variola always appears under the influence of a specific contagion, which may be transmitted mediately as well as immediately, and through the medium of the atmosphere. It spares no age nor sex; even the fœtus in utero is not exempt from the infection. It frequently appears epidemically during summer and autumn, but it may occur in all

seasons and in every climate. Some individuals have the power of resisting its influence, even when placed in the most favorable circumstances for catching the disease; but these cases are rare, and such individuals most frequently take it at some other period. In general it does not affect the same individual more than once during life; but there are innumerable instances on record in which it occurred twice, and even thrice, with the same degree of intensity as at first, in the same person. Numerous curious and well authenticated cases of this kind may be found in the work of Dr. Thompson (*Historical Sketches and Enquiries, &c.*), and among others, that of a lady who, after having had variola in her youth, had the disease six times while nursing her six children successively, who were inoculated with the virus.*

Varioloid.—When small-pox occurs in persons who have been vaccinated or inoculated, it is accompanied with special characters; it is greatly modified, but more so in the former than in the latter instance, and has been described under the name of *varioloid*. We have here an additional proof that the anti-variolous power of vaccination is greater than that of variola itself. This variety differs from variola proper, by the extreme irregularity and rapidity of its course, by the absence of secondary fever, by its mild character in most cases, and by its favorable termination. In some instances, however, it assumes a severer form than distinct small-pox. In these cases, however, the pustules, though but few in number, pass through the stages of those of variola, which is not the case with the pustules of varioloid. The same individual may be affected several times with this variety. The period which has elapsed between the time of vaccination or of a previous attack of small-pox seems to exert no influence on the progress of varioloid, which is sometimes seen in persons who have been carefully vaccinated only a few weeks before, and, at other times, very slight after a vaccination of twenty years previous. The same is also true with regard to its occurrence after variola. We have seen it in individuals who never had the small-pox, and have been vaccinated without success. The virus of a pustule of modified small-pox may produce variola discreta in persons who have not had the disease, or who have not been vaccinated; but the disease is generally very mild. The premonitory symptoms are sometimes very slight; in other instances they are very severe,

* For numerous instances of the recurrence of small-pox, and statistics of its frequency, see *Gregory on Eruptive Fevers*—First Amer. Edit.—1851—Appendix, p. 346. H. D. B.

without being followed by an eruption any more abundant. The eruption may be preceded by slight erythematous patches, scattered irregularly over the body, and is sometimes very slight; at other times, from twenty to a hundred pustules appear on different parts of the body; and sometimes it covers nearly the whole body. It usually commences on the face, but it is often developed simultaneously on different parts of the body; it sometimes commences on the limbs, and very frequently spreads successively over different parts. A number of small, hard, red, elevated spots first appear, somewhat like red papulæ in appearance. Many of them disappear without undergoing any transformation; others become vesicular or pustular in the course of twenty-four hours. The vesicles are small, acuminated, and filled with a whitish fluid; they are frequently transformed into umbilicated pustules, but in general they burst in two or three days, and are replaced by thin, round, slightly-adherent scabs. The vesicles are sometimes surrounded with a red areola, which gives them the appearance of those of vaccinia. The pustules are small, round, and never attain the size of the pustules of variola under any circumstances. They are soft and flaccid, as if their growth had been prematurely arrested. They are sometimes acuminated, sometimes depressed in the centre. The contained fluid is absorbed between the first and fourth day, and either thin, flat, round, brownish incrustations form, and soon fall off; or else hard, brownish, shining scabs, imbedded in the skin, are developed, and continue beyond the twentieth day. It is in consequence of the irregular progress of the eruption, or from frequent successive eruptions, that papular elevations, vesicles, pustules, scales, and scabs are seen on the same individual at the same moment. The scabs are sometimes replaced on the face by warty elevations, which are slow in disappearing. The duration of this mild affection varies from six to twelve days and more. It always terminates favorably, and in some rare cases it leaves a few slight scars behind.

Diagnosis.—The diagnosis of small-pox is not difficult. The presence of the umbilicated pustules, which are generally preceded by fever and general symptoms, together with the peculiar progress of the eruption, are sufficient to distinguish variola, not only from other pustular affections, but from every cutaneous disease. *Varicella* is more frequently taken for small-pox than any other affection. It is the distinct form of variola, and the varioloid, that are generally confounded with varicella; but these errors are not unfrequently owing to the preconceived views and opinions of the observer. As,

for example, those who deny the possibility of a second infection, or that variola can be developed after vaccination or inoculation, will not admit the identity of the disease; and hence they give it the name of *varicella*. In comparing the progress of the varioloid disease with that of varicella, they are undoubtedly very similar in many points of view. Under the head of varicella we have pointed out fully those characters which perfectly distinguish the one from the other. The diagnosis of the various affections with which variola is complicated is often very difficult. The progress of these diseases is frequently so rapid that death may ensue before the manifestation of a single symptom indicating danger.

Prognosis.—The prognosis of small-pox is not unfavorable when the eruption is mild and its progress regular; but it should be very guarded when the disease is confluent, in consequence of the dangerous complications which commonly occur during the course of that form of variola. It will be unfavorable when the disease occurs in children at the period of dentition; in strong and plethoric adults; in persons debilitated and worn out, either by age, dissipation, or some former complaint; in pregnant women, or in those newly delivered; and in young females who have a great horror of the anti-cosmetic powers of this fearful malady. When the precursory symptoms disappear suddenly, or continue with violence after the eruption has appeared, danger is to be apprehended. When the eruption is abundant, when it is mingled with petechiæ, and the pustules filled with blood, the prognosis will also be unfavorable. When the eruption does not advance, and when the pustules remain indolent, white, and flattened, it will not be very favorable; but the nature and intensity of the general symptoms should be carefully taken into account before pronouncing an unfavorable issue. The condition of the cerebral and thoracic organs should never be lost sight of. They require the greatest attention.

Treatment.—When variola pursues a regular course, and is not complicated with any internal disease, rest, a cool temperature, regimen, and diluents are the only measures required. Emetics are in general unnecessary. If there is constipation present, it can be obviated by simple injections of warm water, &c., or by mild laxatives. The pediluvium, or the application of warm cataplasms to the feet, when there is intense headache; mild cooling gargles, when the throat is sore and painful; and emollient lotions to the eyelids when the pustules are producing irritation, are the only remedies required in simple small-pox. When the eruption is slow in

appearing, and when there is no organic disease present, an emetic or sudorifics, as the acetate of ammonia, may be administered; a warm, and even a vapor bath, may often be employed with advantage.

When variola appears with symptoms of greater severity, and especially at the period of invasion, when there are symptoms of cerebral or gastro-intestinal irritation present, venesection or local bleeding may be resorted to with the greatest advantage. General bloodletting has long had its advocates in the treatment of variola: while many think that it may even be injurious. It is too true that it does not always prevent a fatal result; and when several times repeated for the sake of cutting short the eruption, the result has been unfavorable, and often very serious. If not used until congestion has taken place in different internal organs, it may hasten death. Local bleeding should be practised at the anus, epigastrium, neck, temples, or mastoid processes, according to the nature of the symptoms. When there is acute local pain, a number of leeches should be applied without hesitation to the part. General bleeding is always indicated when the patient is strong and vigorous, when the eruption is confluent, and when symptoms of organic disease supervene; but bleeding should never be had recourse to during the period of suppuration, when the patient's strength is exhausted. When the internal congestion advances slowly and insidiously, and the pulse sinks, blisters to the legs and purgatives are often more efficacious than bleeding; but if the latter remedy is decidedly indicated, local bleeding should be employed. As a general rule, when venesection is indicated, it should be performed freely, so as to produce an evident and decided effect on the system. But we should always bear in mind that bleeding is far from acting so favorably in the inflammatory complications of variola as in simple phlegmasiæ of the same organs.

Mild purgatives are frequently of great service at the period of suppuration, in checking the insidious inflammatory and congested state of the brain and lungs, which commonly obtains in the more dangerous forms of variola. It has been proposed, with the view of lessening the deformity which so frequently arises from small-pox, to rub the surface of the body roughly with a coarse towel, as soon as the eruption is completed; also to cauterize the pustules on the face, both to prevent cerebral congestion and to prevent scars. But these advantages are more imaginary than real, as we have often seen this plan of treatment followed by effects the very opposite of what was expected. But when ophthalmia supervenes,

the pustules on the eyelids should always be cauterized immediately with the nitrate of silver, either in the form of ointment, in solution, or in the solid form. The best means of preventing cicatrices from forming on the face, consists in opening carefully each pustule, pressing the matter gently out, and preventing the scabs from remaining long, by the application of emollient fomentations. Different plasters have been recommended of late years, and especially the Emplastrum de Vigo; but they do little good in mild cases, and may do harm in the severe ones.* The application of cold water to the body should never be employed.

Emetics, and also *acetate of ammonia*, together with the use of temporary blisters, sinapisms, and warm baths, are especially serviceable in these cases, when the eruption is arrested by cold during winter, when its progress is slow, and when there is general prostration and sinking of the pulse.

Tonics are often very useful after the period of suppuration, when the patient's strength is exhausted; but these remedies, together with opiates, which are very beneficial in checking the diarrhœa and in producing sleep, should be administered with much caution and watchfulness. Towards the termination of the disease, warm baths, administered with the necessary precautions, will favor desquamation, and obviate, in a great measure, the tendency which exists to the development of boils, subcutaneous abscesses, pustules of ecthyma, &c. A few mild laxatives are often required after the disease has completely subsided. The various affections with which variola may be complicated, require each a separate and appropriate treatment, the details of which would be out of place in a work of this kind.

VACCINIA.

SYN.—Cow-pox; Grease.

Vaccinia is more a vesicular than a pustular disease; but as it is so nearly allied to variola, we shall, perhaps, be excused for describing it in this place.

Vaccinia is a contagious eruptive disorder, developed spontaneously in the udder of the cow, and when communicated to man it has the effect of preventing, or at least of modifying, the eruption of small-pox. It is characterized by the appearance of one or more silvery-looking, large, flat, multilocular

* Mercurial ointment, sulphur ointment, gold leaf, and almond oil, have all been recommended as local applications for this purpose. For results, see Braithwaite's Retrospect of Pract. Med. and Surgery, No. 3, p. 51. More recently, the tincture of iodine and collodion have both been recommended for this purpose.—H. D. B.

pustules, depressed in the centre, surrounded with an erythematous areola, producing a brownish scab, which is detached about the twenty-fifth day, and leaves behind a peculiar cicatrix.

Causes.—Dairy-women are often infected, from milking cows with this eruption on their teats. Genuine vaccinia is sometimes developed on the hands of ostlers who have the care of horses with the *grease;* but the eruption is most commonly produced by vaccination with the virus of the cow, or with that which is produced in the human subject from the original source. The latter is generally preferred, because it induces a milder form of the eruption, and is equally as certain in its action as the former.* The vaccine virus possesses its greatest activity about the fourth or fifth day from the appearance of the pustule, or the eighth or ninth day from the period of vaccination. The upper third of the arm, over the insertion of the deltoid muscle, is the part usually selected for vaccination—an exceedingly simple operation, which may be performed in the following manner: The surgeon should take hold of the posterior part of the arm to be operated upon with his left hand, and draw the skin tightly backwards, and with the other hand he should introduce the point of a lancet, charged with the virus, a few lines into the skin in an oblique direction. It should be allowed to remain in that position for a few seconds, and when withdrawn, the puncture should be compressed for a moment or so, in order to prevent it from bleeding. To ensure success, several punctures are frequently made at the same time; but a single well-developed vesicle is sufficient to impregnate the system with the infection. Some patients are very insusceptible of the vaccine contagion, and require to be vaccinated several different times before they become infected. Children under six weeks of age should never be vaccinated unless in case of urgent necessity.

Symptoms.—The progress of the eruption of vaccinia is marked by four different periods. 1. The first continues for three to four days from the date of inoculation; but it is sometimes prolonged up to the fifteenth, twentieth, and twenty-fifth day, during which the puncture undergoes no further change than that produced by the red areola which surrounds it almost from the beginning. 2. In the second

* Gregory says (*Lect. on Erupt. Fevers, first Amer. Edit., New York,* 1851, p. 259), that "lymph recently derived from the cow possesses so much intensity, and fixes itself with so much more of a poisonous character upon the skin than lymph long habituated to the human constitution, that a single incision made with it is equivalent to six or eight made with lymph of minor energy."—H. D. B.

stage, which commences generally about the third or fourth day, and terminates on the eighth or ninth, a small, hard, red spot is perceived, which is raised and distended on the fifth day by a serous exudation. On the sixth it becomes a perfectly formed umbilicated vesicle of a whitish color, and round or oval form. When the puncture is large, the vesicle gradually increases, and preserves its umbilicated appearance to the end of the eighth or ninth day. This is the proper period for obtaining the virus. 3. The third period commences on the eighth or ninth day, when the vesicle has acquired its full development, and is surrounded with a bright red areola, varying in size from three or four lines to two inches, the development of which is accompanied with considerable tumefaction of the skin, and of the subcutaneous tissue. This erythematous ring is often the seat of small vesicles. These characters are well marked on the tenth day, when febrile symptoms, engorgement of the lymphatics of the arm, and a roseolous or erythematous rash, often supervene. 4. The fourth period commences on the tenth day. The areola begins to fade, the serous fluid becomes purulent, desiccation commences at the centre, the tumefaction subsides, and the vesicle is speedily transformed into a hard, dark brown, circular scab, which becomes blackish, and falls off from the twentieth to the twenty-fifth day from the date of vaccination. When it is detached, a depressed, circular, and honeycomb-looking cicatrix remains, with several depressions at its base, indicating the number of the cells of the vesicle. The mark of this cicatrix is indelible.* Accidental eruptions of the same character may be produced by the application of the vaccine matter to other parts by the nails which have been charged with it by scratching the place of its insertion. General vaccine eruptions over the body sometimes follow the insertion of vaccine virus, the matter taken from which will communicate the genuine disease.

Such is the regular progress and form of vaccinia, and these are the characters which it should present in order to fulfil the intended object. When the eruption does not pursue the course above described, it is called false cow-pox, and never prevents the occurrence of variola. It often happens that, instead of a vesicle, a true pustule is formed. The inflammatory symptoms appear on the same day, or on that follow-

* It may be considered as fully established, that the vaccine scar may and does wear out in the progress of life, and that, in the words of Dr. Gregory (*Lectures on Eruptive Fevers*, first American edition, New York, 1851, p. 250), "the total absence of cicatrix is not decisive against the present or prior existence of vaccine-energy in the system." H. D. B.

ing vaccination. The puncture is surrounded with a deep red areola, the pustule increases rapidly, and is raised at the centre. On the fourth or fifth day it is replaced by a brown scab, which does not remain long, and never leaves a cicatrix behind. The eruption may also assume a purely vesicular character, but in neither case will it prevail against variola.*

Willan has described three varieties of false cow-pox: 1. In the first, the vesicle is perfectly formed, but the areola does not appear, neither does the inflammatory blush, commonly observed about the ninth or tenth day. 2. In the second, the vesicle is pearly-colored, much smaller than that of true vaccinia; it is flat, the circumference is not round, nor does it extend beyond the base, which is hard, inflamed, slightly raised, and encircled with a deep-red areola. 3. In the third variety, the vesicle is also small, it is acuminated, and the areola, which is sometimes of a pale-red color, is much extended or spread. In the two latter instances, the areola appears about the seventh or eighth day, and disappears on the tenth. The scab and cicatrix which follow are smaller and more irregular than those of vaccinia proper. It is the opinion of some, that even if the vaccine vesicle does pursue a regular course, the formation of purulent matter by the ninth day, and also a small and brittle scab, should lessen our confidence in its protective power. The same effect is also thought to result from rubbing or scratching the vesicle so as to interfere with its regular progress, and also from opening it too frequently for the purpose of taking lymph.

The production of false cow-pox is attributed to the following causes: 1. From inoculating with vaccine virus individuals who have been already vaccinated, or who have had small-pox. 2. From inoculating with the virus of a false vesicle, or from genuine vaccine matter taken at too late a period from the vesicle. 3. From the complication of scarlatina, measles, gastro-enteritis, or from the existence of some chronic cutaneous disease, as prurigo, eczema, porrigo, lepra, &c. But at the present day we seldom meet with false cow-pox; in the great majority of cases, it either fails entirely, or goes through its regular course. Hence, the two most important questions now are, why genuine cow-pox is not perfectly protective, and after what length of time it loses its anti-variolous power.

* Gregory says (*Op. Cit.*, p. 259) that the body of the child is sometimes covered from the ninth to the twelfth day, and even later, with a papular eruption of a lichenous character, which he attributes chiefly to the peculiar delicacy of the child's skin, and the fulness of its habit, and which, he says, is not essential to the success of the process, but proves its efficacy. H. D. B.

Dr. Bryce of Edinburgh advanced the opinion that vaccination produced two effects in man: the *local*, which is incapable of protecting the system against variola, and the *general*, which affords such protection, and consists of a certain amount of febrile disturbance. For the purpose of deciding whether the system had undergone this change, which is alone capable of affording the desired protection, he proposed the plan of vaccinating the person a second time, four, five, or six days after the first vaccination; and if the constitution is under the vaccine influence, the vesicles of the second vaccination will mature at the same time as the others.*

Diagnosis.—The pathognomonic characters of this eruption have been so fully described already, it is unnecessary to repeat them here; indeed, vaccinia can hardly be mistaken for any other cutaneous affection, by persons who are at all familiar with that eruption.

Treatment.—Cow-pox is a very simple affection, and is hardly ever accompanied with any other phenomena than the local symptoms of the eruption. In some rare instances it excites slight febrile disturbance, and an erythematous rash; but even in these cases, it requires no other treatment than mild regimen, diluents, and some cooling drinks. The part should be protected from rubbing against the clothes. In cases where the vaccine eruption supervenes on the hands of ostlers having the care of horses with the *grease*, the following remedies may be necessary: acidulated lemonade, emollient local baths, sometimes poultices to diminish the swelling, a few tepid baths, and mild laxatives. If the eruption does not appear in the regular form, and pursue the natural course, the patient should be vaccinated anew. However, even when it appears in a regular and healthy form, the body is often not protected from an attack of small-pox; but if the latter should supervene, it generally assumes a mild character.

[The authors here enter into an elaborate account of the results of revaccination, so extensively practised within the last ten years, in several of the continental countries. They refer especially to the edict of the Prussian government, enforcing revaccination amongst the troops of that country; also to the experimental researches of Heim (*Historische Kritische Darstellung der Pockenseuchen*), and express themselves thus concerning the merits and necessity of revaccination: that the periods defined by Heim and Gregory, when

* This has been long known under the name of Bryce's test. H. D. B.

the vaccine virus loses its anti-variolous power, and consequently when re-vaccination becomes necessary, are not fully established. According to the former writer, the period of exemption is seventeen years, according to the latter fourteen years. That they have frequently observed modified small-pox in persons newly vaccinated, distinctly resulting from variolous contagion, and which had been described as cow-pox: also that they have seen the mildest form of modified cow-pox in individuals who had been vaccinated twenty-five years previously, evidently showing that the vaccine virus had not lost any of its modifying power during that long period. Hence, they conclude that as variola is equally modified a few days and twenty-five years after vaccination, the precise period at which the anti-variolous power of vaccination ceases to exist cannot be rationally decided. They are by no means so sanguine as the German writers in favor of revaccination, and of the prophylactic advantages to be derived from it; but with the view of regenerating the cow-pox virus, they recommend the method of M. Wanner, of Rambouillet, which consists in inoculating the udder of the cow with virus taken from the human subject, although aware that this plan had been adopted formerly without success.]*

* There are several interesting points connected with this subject which the nature of the present work as a *manual* excludes from investigation, and to which we will only allude.

The value and necessity of *revaccination* may be considered as fully established by the results of its trial in the Prussian, Hanoverian, and other Continental armies. It has been practised in the Prussian army since 1833, and the result is that the small-pox has been almost entirely extirpated. In Wirtemberg, but one case of variola occurred in five years among 14,384 revaccinated soldiers, and three only among 29,664 revaccinated civilians.

The extent of protective power of vaccination can never be definitely fixed, at the same time that we can approximate near enough to the truth for practical purposes. The ratio of cases of small-pox after vaccination is low before ten years of age. The maximum of susceptibility is from fifteen to twenty-five years of age—(Dr. Gregory places this maximum from twenty to twenty-five)—after this period it gradually diminishes. Tomasini thinks that its protective power only lasts ten or twelve years.

Facts prove that small-pox in the unvaccinated is five times more fatal than in those who have been vaccinated—and in the words of the late Dr. Forry (*Boylston Prize Essay on Vaccination, N. York Journ. Med., Sept.*, 1844), "When perfect, vaccination is as complete a protection as any other prophylactic known to man," for when perfect, variola does not occur more frequently after it than small-pox after small-pox.

Among the causes which modify the protective power of vaccination, Dr. Gregory (op. cit.) mentions puberty, change of climate, a severe attack of fever, and an epidemic constitution of the season.

The following are some of the most important conclusions embodied in the report of the committee on vaccination of the French Academy of Sciences, made February 25th, 1845:—

ECTHYMA.

SYN.—*Phlyzacia; Agria; Scabies fera; Furunculi atonici.*

Ecthyma is a disease of the skin, characterized by large round phlyzacious pustules, almost always distinct, and seated upon a hard inflamed base. These pustules are succeeded by thick, dark-colored scabs, which sometimes leave slight superficial cicatrices behind them, or more frequently, red stains, which disappear after a certain time. This eruption may appear on every part of the body, more especially on the neck, the shoulders, the buttocks, the extremities, and the chest. The pustules are seldom developed on the face or on the scalp. Although they are generally distinct from each other, they may, however, spread over a large surface, even over the whole body, but they are usually confined to some particular region.

Causes.—Ecthyma is frequently produced by distinctly apparent causes: it is also sometimes developed spontaneously. In the first instance, it is often the result of irritating applications to the skin; thus, for instance, the characteristic pustules of ecthyma are frequently produced by friction with tartar emetic ointment. The pustules are usually set close together, the epidermis is always elevated for a considerable extent by a sero-purulent fluid, and this elevation is in gene-

1. Small-pox rarely attacks those who have been vaccinated before the age of ten or twelve, from which age, until thirty or thirty-five, they are particularly liable to small-pox.

2. Vaccine matter taken directly from the cow causes local symptoms of greater intensity; its effects are also more certain than those of old vaccine matter; but after being transmitted for a few weeks through the human subject, the local intensity disappears.

3. It is prudent to regenerate vaccine matter as frequently as possible, to preserve its protective power, and the only mode of doing this deserving of confidence is to procure it from the cow.

4. Revaccination is the only known method of distinguishing those vaccinated persons that remain protected, from those that do not.

5. The success of revaccination is not a certain proof that the person in whom it succeeds was liable to contract small-pox; it merely establishes a tolerably strong presumption that he was more or less liable to take it.

6. In ordinary periods, revaccination should be practised after fourteen years, but sooner during an epidemic.

M. Chomel says, "if anything can lead to the extirpation of small-pox, it is revaccination upon the most extensive scale" (*L'Abeille Méd., Fev.* 15, 1851); and we might add the strongest testimony from various sources in favor of the importance and indeed, we may say, the necessity of this practice. But we must refer our readers to other works for facts and items on the subject, and among these, to the valuable essay on the subject by the lamented Dr. Forry (*New York Journal Med. and Surg., Sept.*, 1844), and to Dr. Gregory's Lectures on the Eruptive Fevers, Amer. Edit., N. York, 1851; appendix, p. 370. H. D. B.

ral umbilicated. They continue for several days, and are then succeeded by scabs, which begin to form in the centre; the accompanying inflammation is sometimes pretty severe, but it does not occasion any inconvenience, inasmuch as it is often desirable to establish this condition as a curative measure. It must not, however, be allowed to become intense without having recourse to emollients.

Idiopathic ecthyma is often the result of handling pulverulent and metallic substances; hence it is so frequently seen in grocers and masons. Ecthyma is also developed spontaneously, and in general appears to be symptomatic of some peculiar condition of the economy. It attacks all ages, and appears in every season, but it most frequently appears during the spring and summer in young persons and in adults. Women are sometimes affected with it during pregnancy. It appears to result in the majority of cases from great exertion, fatigue, bad food, want of cleanliness, and intense mental emotions. It is likewise developed in the advanced stages of certain chronic affections of the skin, as lichen, prurigo, and especially scabies; or during the convalescence of some of the acute diseases, as scarlatina, measles, and variola. Finally, chronic inflammation of some of the internal organs may have considerable influence on the production of ecthyma, and in some rare cases an eruption of ecthymatous pustules has appeared during the crisis of gastro-enteritis. Ecthyma may be altogether partial, and confined to one particular spot, when its duration varies from one to two weeks; or it may be general, appearing on every part of the body at the same time, usually by successive eruptions, and continue for weeks and even months.

Symptoms.—When the disease is partial, the eruption appears at once; but it more commonly shows itself in successive crops. It usually commences with the evolution of red, inflamed, circumscribed spots, which attain a considerable size in the course of a few days. Their apices soon contain pus, whilst their bases are hard, circumscribed, and of a deep red color. The fluid dries up in three or four days; and pretty thick scabs are formed, leaving dark red stains behind when they fall off. The pustules are in general distinct; they sometimes form irregular groups, and vary in size from that of a pea to that of a shilling, and beyond. The eruption is occasionally accompanied with very severe pain. In some instances suppuration takes place rapidly; in others slowly, not for several days. Sometimes the pus forms in small quantity, and occupies the apex of the pustule alone, the base of which is broad, hard, and inflamed. The epidermis is

often raised considerably, so as to form a bulla. The purulent fluid seems then to be confined beneath by a thin circular layer of transparent serous fluid. This appearance presents especially when the pustules are formed on the hands and feet. Some of the pustules terminate by resolution, and slight whitish incrustations appear successively on the surface; but generally they are succeeded by thick, adherent scabs, which on falling off leave a deep-red patch, and in some rare instances a cicatrix. When the eruption is successively developed for a considerable period, the red patches become very numerous and confounded together, giving a peculiar appearance to the diseased surface, which is only to be seen in ecthyma. Sometimes to these pustules succeed deep ulcerations, particularly those on the lower extremities, and which follow scarlatina and small-pox. They are then greatly inflamed round the base, the scabs are thick, and the ulcerated surface is in general dull, sanious, bloody, painful, and always unhealthy looking.

Ecthyma frequently occurs in weak, ill-fed, cachectic children, especially during the convalescence of gastro-enteritis, when accompanied with distended abdomen. The size of the pustules is generally irregular in these cases, and a small pimple may often be seen close by a large pustule. They are of a circular form, and their color is more or less red, according as the child is more or less feeble and debilitated. The large pustules frequently suppurate, and, after a lengthened period, terminate in a small cicatrix; but often, after threatening suppuration, they gradually diminish, and terminate by desquamation.

In old, debilitated persons, much addicted to drink, a variety of ecthyma is often observed, the *ecthyma cachecticum* of Willan, having much resemblance to rupia. It generally forms on the limbs, but every part of the body is subject to it. The skin is inflamed, and more swollen than in the common forms of the disease. It assumes a deep-red color, and in about six or eight days the cuticle is raised over the pustule, is blackish, and infiltrated with blood. It soon bursts, and forms a thick, dark scab, raised at the centre; the edges are hard, callous, and more or less inflamed. The scabs are very adherent, and do not become detached for several weeks—sometimes for months. If they fall accidentally, an unhealthy ulceration ensues, and the scab is with difficulty removed. Sometimes febrile symptoms precede or accompany the eruption, but they generally disappear with the disease. Sometimes engorgement of the lymphatic ganglions accompanies this affection, which it will be necessary to

reduce by emollient applications, and sometimes by local bleeding. Suppuration and desiccation are the usual terminations of ecthyma. Resolution and ulceration are much more rare.

Diagnosis.—The pustules of ecthyma are generally easily recognized by their size, their inflamed base, and their mode of development. These characters are sufficient to prevent them from being confounded with those of *acne*, *impetigo*, *sycosis*, and *porrigo*. However, when the pustules of acne and sycosis are accompanied with a hard, red base, as they often are, they might be mistaken for the *phlyzacious* pustules of ecthyma, if the induration more than the inflamed base of the former, and other peculiarities, which are always to be detected, did not obviate this error. The umbilicated pustules of *variola*, and the multilocular pustules of *vaccinia*, together with their contagious nature, will prevent their being confounded with ecthyma.

It is more difficult to distinguish the eruption of ecthyma from that of *syphilis*, especially as the latter sometimes presents the same physical characters as the former. In these cases, the copper-colored areola, the history of the case, and the accompanying symptoms, form the basis of our diagnosis. Ecthyma cannot be confounded with *scabies*, if we recollect that the one is a vesicular and the other a pustular disease; and if a few pustules should appear amongst the vesicles, the respective characters of scabies and ecthyma will enable them to be distinguished at a glance. Besides which, the small vesicles intermingled with the pustules, will remove all doubt.

Ecthyma may be distinguished from *furunculi*, by bearing in mind, that in the former, the inflammation proceeds from without inwards, whilst in furunculi it commences in the subcutaneous cellular tissue, which becomes mortified to a certain extent. It then proceeds outwards, and forms an opening, by which the dead tissue is expelled. Finally, *rupia* resembles ecthyma so much, that these two affections often appear to be merely varieties of the same disease. Ecthyma luridum, in which the epidermis, raised by dark-colored blood, is succeeded by a very thick scab, covering an ulcerated surface, is much more difficult to distinguish from rupia than the simpler varieties of that disease, the phlyzacious pustules of E. simplex resting on a hard and inflamed base, and followed by irregularly-shaped scabs and superficial excoriations, differing enough from elevations of the epidermis by a seropurulent fluid which constitute bullæ, and succeeded by prominent scabs resembling the shell of an oyster, and covering

ulcerations which are often deep, to distinguish that form of ecthyma from rupia.

Prognosis.—Ecthyma is not a dangerous affection. The prognosis varies according to the extent of the disease, the age and condition of the patient, and the nature of the accompanying lesions.

Treatment.—When the eruption is mild, partial, and follows a regular course, it merely requires diluents, simple or emollient baths, attention to diet. If it assumes a severe form, and is accompanied with much inflammation, a moderate bleeding, or the application of leeches, may be resorted to with advantage. When the disease is of long standing, and the constitution of the patient is deteriorated, hygienic measures should form the principal part of the treatment. The patient should take moderate exercise, and nourishing food, together with simple or slightly stimulating baths, as the alkaline or salt-water bath. Mild laxatives are very beneficial. Spirituous liquors, and excesses of all kinds, should be particularly avoided. Tonics, as quinine, iron, &c., are sometimes required. Emollient applications ought to be employed when the ulcers are inflamed, and difficult to heal. It is sometimes necessary, on the other hand, to excite the surface with nitrate of silver, or some stimulating lotions. Muriatic acid, diluted with water, is very efficacious in altering the condition of the parts, which under this treatment assume a more healthy aspect, and soon cicatrize.*

IMPETIGO.

Syn.—*Dartre crustacée; Lèpre humide;* Crusted Tetter; Running Tetter; Cowrap.

Impetigo is a non-contagious disease of the skin, characterized by an eruption of psydracious pustules, most commonly grouped in clusters, and forming thick, yellowish, rough

* In the chronic form of ecthyma particularly, the secretions must be carefully regulated, for which purpose moderate doses of some mercurial preparation will often be found necessary. In the *cachectic* form, the mineral acids, as the sulphuric, in the form of elixir vitriol, from ten to thirty drops three times daily, and continued for some time, will often prove very effectual. Opium may be combined with it if it produces irritation, and may also be given alone, or in the form of Dover's powder when there is great restlessness. The hydriodate of potash will prove valuable in some cases, and the iodide of iron also, when the mucous membrane of the alimentary canal will bear it. When occurring in infants, the digestive organs require constant attention—the diet in these cases must be nutritious and easy of digestion, without being stimulating. Vegetable bitters, quinine, and preparations of iron will often be required, when the system is properly prepared for their use. Fresh air and cleanliness are also important auxiliaries, and often essential to the cure. H. D. B.

incrustations. When the pustules of impetigo are grouped together, forming circumscribed patches of different forms and extent, they constitute the variety described by Willan as *impetigo figurata*. When they are scattered, and do not assume any particular order, they form the *impetigo sparsa* of the same author. Each may assume the acute or chronic form. There are many intermediate varieties between them, which have characters peculiar to themselves.

Impetigo figurata occurs most frequently on the face, and especially on the cheeks; it is, however, often met with on the extremities, and even on the body, and usually attacks children during dentition, young persons of both sexes, of a lymphatic or sanguineous temperament, with a fresh color, and fine delicate skin. It appears most frequently in spring, and some individuals are periodically affected with it for years. Its development is not accompanied with any other symptoms than those of headache and slight indisposition. When I. figurata is developed on the face, it frequently appears in the form of small, distinct, red, and slightly raised patches, which are soon covered with small pustules, nearly confluent. These patches may remain isolated, or else become united by the formation of pustules in their interstices. The eruption is often much more extended, and the inflammation more intense. Thus, for instance, both cheeks, and even the chin, may be affected at the same time. A certain degree of constitutional disturbance exists in these cases, and the eruption is frequently preceded and accompanied by a kind of erysipelatous inflammation.

The eruption is pustular from the beginning, and the pustules are small, confluent, and very slightly raised above the level of the skin. They burst between thirty-six and seventy-two hours from their formation, and discharge a purulent fluid. The heat, itching, and tension are then increased. The fluid is abundantly discharged by numerous small orifices; it soon dries up, and forms thickish, yellow, friable, semi-transparent incrustations, which have some resemblance to the gummy exudations of certain trees, or to layers of concrete honey. The discharge continues, the scabs increase in thickness, and it is in this condition that the patient generally applies to the physician. The scabs form on a red, inflamed, and irregularly-rounded patch, whence exudes a seropurulent fluid in variable quantity. There still remain a few isolated psydracious pustules around the periphery of these inflamed surfaces, and on others the discharged fluid is scarcely concreted. When the disease is not prolonged by successive eruptions, it remains in this incrusted condition

from two to four weeks. The itching and heat then subside, the exudation diminishes, and the scabs are gradually but irregularly detached, leaving a red and tender surface behind. An ichorous fluid may be discharged from minute pores, which sometimes exist underneath, and give rise to the formation of new scabs, which are thinner. Finally, when the incrustations have altogether disappeared, the skin remains red, shining, and tender for a considerable time, during which the slightest irritation will reproduce the disease.

This variety may first appear on a small detached surface, and ultimately spread round the circumference by the successive development of psydracious pustules. Desiccation commences in these cases at the centre. I. figurata is sometimes prolonged for weeks, and even for years, by the successive development of the eruptions, and is then chronic in its duration, while the fresh pustules keep up an acute state. The chief causes which prolong the disease in this manner are intemperance, high living, irritating applications, as caustic, for example, and the injudicious employment of the preparations of sulphur. The skin may become deeply inflamed and indurated in these cases; but it never presents that peculiar roughness which is observed in those varieties of chronic impetigo figurata that are confined to the extremities. This variety sometimes occupies but a very limited surface on the face; it is confined to the eyelids, on the middle of which prominent conical incrustations are formed. It produces a state of chronic ophthalmia, which is often very troublesome. In other instances the eruption appears on the upper lip, exactly like a pair of moustaches.

Impetigo figurata may also appear on the extremities, and even on the trunk. When it affects the lower extremities, the inflamed patches are in general large, and of an irregularly-oval form, whilst on the upper extremities they are more circular and less extended. The pustules are developed in the same manner as on the face, and are speedily replaced by thick yellowish-green or brown scabs. When these are detached, they are succeeded by others produced by the desiccation of the sero-purulent fluid, discharged by the inflamed surface. I. figurata may assume a chronic form. It then appears only from time to time on small portions of the inflamed patches, near their circumference; and the successive eruptions and large crops of pustules of the acute variety are never present. The cuticle is inflamed to a certain depth, and it acquires a remarkable degree of thickness. In the same person may be seen scabby patches, of different sizes and forms. Sometimes a large incrustation is

seated on the inner side of the thigh, whilst in other cases the same product is developed on the outer side, or on the leg, and even on the abdomen. In some cases the pustules never appear, and the disease is recognised merely by the peculiar form of the patches, and the presence of the scabs. When in the progress of cure the heat and itching diminish, the discharge becomes less abundant, and the scabs less thick; the edges commence drying up, and the surface ceases gradually to be covered with scabs; but the natural color of the skin returns very slowly.

Impetigo sparsa differs from the preceding variety merely in the irregular and scattered distribution of the pustules; otherwise it pursues the same course, and produces the same kind of thick, rough, and greenish-yellow scabs. This variety appears most frequently during autumn, continues the whole of the winter, and disappears on the return of warm weather. It has a greater tendency than I. figurata to pass into the chronic state. Although I. sparsa may present itself on any part of the body, it most frequently attacks the extremities, especially the legs and the bends of the joints. Sometimes it is confined to a single region, in other cases it covers the whole limb. The pustules are scattered, are accompanied with a smart itching, and soon burst. Yellow incrustations are formed by the partial desiccation of the sero-purulent fluid. They are rough, thick, friable, and very different from the laminated incrustations of eczema; they cover the whole of the diseased surface, but some scattered pustules are always to be seen. When the scabs fall, either naturally or from the treatment adopted, an inflamed surface remains, with occasional superficial excoriations. A sero-purulent fluid exudes from this surface, speedily saturates the dressings, lint, &c.; and, by its partial desiccation, reproduces the scabs. In some cases, and especially in persons advanced in years, and of a debilitated constitution, the scabs acquire a considerable degree of thickness, and a deep brownish yellow color, not unlike the bark of a tree, hence the name *impetigo scabida*. These incrustations sometimes encase the whole limb, the movements of which become painful and difficult, and are accompanied with heat and a distressing itching. The crusts soon fall off, and are speedily replaced by others. When the disease is intense, and occupies the lower extremities, it is sometimes complicated with anasarca, and extensive ulcerations. When it extends to the toes, the nails are often destroyed, and when regenerated, are thick and rough, like those seen in some cases of lepra and psoriasis.

Although impetigo is not generally accompanied with

febrile symptoms, it sometimes, however, assumes an inflammatory character. In these cases it is accompanied with much constitutional disturbance, fever, burning itching, and erysipelatous inflammation. (*Impetigo erysipelatodes*, Willan.) M. Biett used to describe another variety, which is rarely met with, and which is sometimes confounded with impetigo erysipelatodes, and sometimes with an ulcerated syphilitic eruption, the *impetigo rodens* of authors.* It seems to destroy the tissues in which it is developed. The duration of the disease varies from three to four weeks, or it may even be prolonged indefinitely.

Causes.—Impetigo often results from the application of irritating substances to the skin, as from handling brown sugar, lime, metallic filings, &c. It appears in all seasons, but especially during spring and autumn, and principally affects children during dentition, females at the critical period, and persons of a lymphatic or sanguineous temperament with a fine delicate skin. Excess in diet, violent exercise, strong mental emotions, as grief, fear, &c., sometimes produce the disease. It is often complicated with other diseases of the skin, especially with *lichen*.

Diagnosis.—The presence of *psydracious* pustules, in clusters, or scattered, which are succeeded by thick, rough, and yellowish scabs, is sufficient to distinguish impetigo from the vesicular or vesiculo-pustular eruptions of *eczema*, which, on the contrary, are succeeded by thin, laminated scaly crusts, with a few vesicles scattered here and there. When impetigo figurata appears on the chin, it requires some attention to distinguish it from *sycosis*. In impetigo the pustules are small, yellow, and set close together. The exudation is considerable, the incrustations are thick, yellowish-green, and semi-transparent; besides, there are no indurations or tubercles. The pustules of *sycosis*, on the other hand, are larger, isolated, more raised, and less yellow than those of impetigo; the exudation is by no means so copious, the scabs are drier, of a deeper color, and are only reproduced by a new eruption, not by a cutaneous discharge.

Impetigo of the hairy scalp may be mistaken for *porrigo*. The peculiar pustules of porrigo favosa, imbedded in the epidermis, and terminating in yellow umbilicated scabs, and also those of porrigo scutulata, which, owing to their being agglomerated, still more resemble impetigo, are sufficient to

* Houghton says (*Cycl. Prac. Med. Art. Noli me tangere*), that the term *Impetigo rodens* has been derived from cases of complication of impetigo with lupus, it being not uncommon to find pustules of that disease in the neighbourhood of lupoid patches.—H. D. B.

distinguish them; besides, those varieties of porrigo are contagious, and cause the hair to fall, symptoms which are not characteristic of the impetiginous eruptions. When *itch* is complicated with impetigo, it requires but little attention to detect the vesicles. It should be borne in mind that the pustules, which in the majority of instances are merely complications, are either psydracious pustules of impetigo, or phlyzacious pustules of ecthyma.

The thick scabs which appear on the face during the syphilitic eruption have been mistaken for impetigo. But a physician who could commit such an error must be entirely unacquainted with the differential diagnosis of the diseases of the skin. The large, thick, blackish, and very adherent incrustations, seated on a violet-colored surface, and surrounded with several indelible cicatrices, which terminate in deep ulcerations, a certain rounded form of the eruption taken as a whole, and a peculiar aspect, which once seen can never be mistaken, are sufficient to prevent the occurrence of so serious an error.

Prognosis.—Impetigo is not a dangerous disease, but it is nevertheless exceedingly troublesome and often very repulsive. The physician should be on his guard not to promise a speedy cure, a circumstance which rarely occurs. The disease is very obstinate in persons advanced in years and with a broken down constitution; and, on the other hand, it is more manageable in young and robust subjects, especially if it assumes an acute form.

Treatment.—The preparations of sulphur have been too generally recommended in impetigo. Their indiscriminate employment is often decidedly injurious, especially in the early stage. When the disease is limited, and the local symptoms mild, emollient lotions of marshmallows, decoction of poppy heads, bran, or almond emulsions, are the best applications that can be used; refreshing acidulated drinks should at the same time be administered to the patients. But if the disease spreads, and covers the greater part of the face, general and local bleeding will often be required, and should be regulated according to the strength of the patient. Bleeding from the foot and the application of leeches to the mastoid processes, or to the arms, will generally suffice. When the face is the seat of the disease, venesection may be advantageously employed during its progress, as well as at the commencement, especially when it has been aggravated by the use of injudicious remedies. In addition to the lotions just mentioned, mild laxatives may be administered with advantage.

Baths, at a temperature between 88° and 90° Fahr., are often

useful even when the face is affected, in diminishing the general irritation. If they are employed at a higher temperature, they will probably produce cerebral congestion. When the inflammation subsides, emollient lotions with a little alum in them will be found very beneficial. Towards the termination of the disease, when it seems to be slow of disappearing, baths and the vapor douche are very useful in altering the condition of the skin to healthy action. It is sometimes necessary to have recourse to more energetic measures than the foregoing, and in these cases purgatives, as calomel, the sulphates of soda and potash, jalap, and castor-oil, are then indicated. The patient may take at the same time acidulated drinks, in the proportion of from fifteen minims to half a drachm of sulphuric acid to the pint. Tepid and alkaline, local and general baths, and alkaline applications, are also beneficial in these instances. The alkaline lotions may be alternated with acidulated applications occasionally. It is very desirable to remove as much as possible of the incrustations from the diseased surfaces, and this is most readily accomplished by the frequent and prolonged employment of tepid baths.

It is when impetigo assumes a chronic character that the sulphureous preparations are really useful. The sulphur waters, either in baths or administered internally, either with or without milk, are then most frequently employed. The salt-water bath has sometimes effected a radical cure of this form of the disease. The vapor bath, and particularly the vapor douche, is often very efficacious if applied to the patches of *impetigo figurata* when they have passed into a chronic state. The douche should be continued from ten to twenty minutes, and should be kept a certain distance from the patient. These measures, judiciously employed, usually overcome the most rebellious forms of impetigo; they are most frequently required for old and feeble patients. They may, however, be enforced in young and robust subjects, if the nature of the disease seems to require them.

There are some cases in which all these measures seem to fail; in this event the diseased surface may be cauterized with the diluted acids. Hydrochloric acid is generally preferred, as it is supposed not to produce cicatrices; but this is not correct, and any other acid will fulfil the same end by altering the condition of the skin. A weak solution of nitrate of silver, or some dilute acid, may be applied with a feather passed over the surface, and water should be poured upon it immediately afterwards, in case the acid be too strong. Much care and attention are required in using these remedies. The pro-

tonitrate of mercury, in the form of an ointment, has often been applied with success. The oxide of zinc and acetate of lead ointments are also useful.* When the disease is limited, a blister applied to the diseased parts has often proved beneficial in altering the vitality of the skin.† If all these remedies should fail, we must have recourse to the arsenical preparations, as Pearson's or Fowler's solutions, which are generally followed by the most surprising effects. Pearson's solution is, in the majority of cases, sufficient to produce a perfect cure.

A description of the *achores*, which are merely varieties of impetigo, although falsely classed by Willan amongst the *porrigos*, naturally follows the foregoing. They are characterized by small, superficial, confluent pustules, having no regular order, and seated on an inflamed base. After the lapse of a few days they burst, and a fluid escapes, which concretes and forms large brown scabs, composed of several layers placed over each other, and very different from the thick incrustations which succeed the *favi*. These two varieties have been described under the names of *porrigo larvalis* and *porrigo granulata*, until M. Biett assigned to them their proper place.

Impetigo larvalis is characterized by an eruption of superficial pustules of a whitish yellow color, more or less confluent, and arranged in groups. These pustules are succeeded by yellow and greenish scabs, sometimes thin and laminated, sometimes thick and rough, which have the greatest resemblance to those of eczema impetiginodes and impetigo figurata. This disease is seen most frequently in young subjects, especially infants. It may appear on any part of the body; but the hairy scalp, the ears, and the lips, are its favorite situations. The face is sometimes almost completely covered with thick crusts in the form of a mask, hence the name of *larvalis*. There are several varieties of impetigo larvalis, resulting altogether from the degree of the existing inflammation, and the thickness and extent of the crusts. In very young infants the disease consists solely in the formation of small pustules, which spread over the scalp, temples, &c., producing incrustations of variable size, but generally thin, which have been described by writers under the name of *crusta lactea*. In these cases the disease is ordinarily exceedingly mild, but it is often pretty severe when it appears on the face or scalp, or

* Also ointments of creasote (gtts. xx to xl to ℥j lard), of ioduret of sulphur (℈j to ʒss to ℥j) and of tar and sulphur. H. D. B.

† In the last edition of this work, the whole of the preceding remarks respecting local applications are left out, and we feel that these means are of but equivocal benefit, while they doubtless sometimes do harm. H. D. B.

on both at the same time, as well as on other parts of the body.

Symptoms.—When the disease is about to appear on the face, it usually commences with the formation of a few small pustules on the forehead and cheeks, grouped together, and having an inflamed base. They are accompanied with smart itching, and soon burst either spontaneously or by being scratched with the nails. A viscid yellowish fluid escapes, which forms thin soft incrustations of a greenish yellow color. The exudation continues, new crusts form, the first increasing in thickness; and in some parts they are thick, soft, and round, whilst in others they are thin and laminated. On falling off, a red inflamed surface remains, on which new scabs are formed, but the exudation is often so considerable that it does not concrete. The surface of the cuticle then becomes exposed, from which an acrid viscid fluid exudes by innumerable small orifices. When the disease is diffused, the itching and even the pain are very severe, and the face, with the exception of the nose and eyelids, which are almost always exempt, is concealed as if with a mask.

In other cases the pustules are larger, and are developed behind the ears, round the mouth, upon the chin, &c., terminating in thick yellowish green crusts. In some instances the mouth is surrounded with large and thick yellowish incrustations, which are of a deep brown color in some parts where the fluid is mixed with blood. The movements of the lips are exceedingly painful in these cases. In other instances, again, these large incrustations form only behind the ears. They emit a nauseous odor. The lymphatic ganglions sometimes inflame, and even suppurate, and the eyelids may become the seat of chronic inflammation. Coryza and a copious discharge of mucus by the nares, frequently occurs. When the disease begins to decline, the exudation gradually diminishes, the scabs are not formed so frequently, they become thin and white, their bases are paler, and they are soon succeeded by a slight desquamation, which is not long in disappearing. A light rosy tint only remains on some portions of the diseased surface, which in its turn also fades away. Such is the manner in which this variety usually terminates.

In some cases, however, deep chaps are established, in others, when all the symptoms seem to have disappeared, a new eruption suddenly breaks out, and the disease commences anew. Cicatrices never form spontaneously, and those which have been mentioned by writers were merely the result of scratching the diseased surface. When this variety appears on the *hairy scalp*, the pustules are set close

yellowish white color, and sometimes occupy the posterior part of the head only, whilst in other instances the disease appears on every part covered with hair. These pustules are very small, and are mixed with vesicles, some of which are purulent and others transparent, and are accompanied with smart itching; they soon burst, or, as more frequently happens, they are torn, and throw out a thick viscid fluid, which mats the hair together, and forms irregularly-shaped scabs of a brownish yellow color. The scabs are either scattered or confluent, and spread over a surface of variable extent; the exudation continues, and if the hair is long and not properly attended to, the scalp becomes covered here and there with a thick brownish crust, which dries and cracks into several friable pieces.

When these incrustations are thick and extended, and if the patient has injudiciously applied linen cloths to the head, the latter become saturated with the fluid, and adhere to the parts for months together. A fœtid and disgusting smell is given off when they are at length removed, and the hair abounds with lice, which aggravate the pruritus. On the other hand, when the scabs are carefully raised by means of emollient lotions, the surface beneath is but slightly inflamed and slightly excoriated, from which exudes, through a vast number of pores, a nauseous viscid fluid. Sometimes the subcutaneous cellular tissue becomes inflamed, and small circumscribed collections of matter form, which frequently have to be opened. When the disease is of long standing, and the incrustations firmly adherent, the hair sometimes falls off from some of the diseased parts; but this is merely a temporary baldness, and very different from that which follows porrigo favosa and porrigo scutulata. The bulbs of the hair are not destroyed, they are only inflamed, and new hair soon grows again, as if the parts were never affected. In addition to the localities already enumerated, this disease may extend to the trunk, and even to the limbs. In these cases the pustules appear to be smaller, more scattered, and the scabs thinner. The duration of the disease is very variable; it is, however, always obstinate, and generally continues for several months.

Causes.—Impetigo larvalis is not a contagious disease; it chiefly attacks children, during the periods of dentition. The causes of this eruption are very obscure; it appears in strong well-fed children as well as in those of an opposite condition. Want of cleanliness very often produces it. Adults are pretty often affected with this disease.

Diagnosis.—The characters mentioned elsewhere as be-

longing to *porrigo favosa* and *porrigo scutulata*, are so striking, that these diseases can scarcely be confounded with impetigo larvalis. It is more difficult to distinguish I. larvalis from some other varieties of the same genus, in which the order of development and the form of the scabs are precisely the same. The peculiar seat of the disease, and its degree of severity, are the only data we have for guiding us in the diagnosis.

Prognosis.—Generally speaking, there is little or no constitutional disturbance during this disease. Gastro-intestinal irritation, and diarrhœa, however, sometimes supervene, and the infant wastes. In general the prognosis is not unfavorable, and the eruption is troublesome in proportion as it is accompanied or followed by any severe visceral disease. If it continues for a lengthened period, and has been attended with a copious exudation, it will become more unmanageable, especially when it attacks very young, delicate, and weakly children of the poorer classes.

Treatment.—In most cases, lotions of tepid milk and water, or an infusion of marshmallows, which will both allay the troublesome itching and prevent the scabs from increasing, form the whole of the treatment necessary; and when infants at the breast are attacked, the nurse should be desired to wash the diseased surfaces with her own milk. When there is much itching and irritation, tepid emollient baths should be administered. It will also be desirable to change the infant's nurse, if possible, or at least to diminish the quantity of milk, and give in its stead a little gruel or barley-water. Bleeding is not advisable, unless the child is two or three years old; and when there is much inflammation present, one or two leeches applied behind each ear will generally be sufficient. The same treatment will answer when young persons and adults are affected, only that general bleeding may be practised with advantage when there is much local irritation, or leeches behind the ears, or over the mastoid processes.

When the scalp is affected, the hair should be cut close, and emollient poultices of bread and milk, or of potatoe-flour, and an infusion of marshmallows ought to be constantly applied. When the eruption is of long standing, and diffused, we should endeavor to alter the condition of t
alkaline and sulphureous lotions, and two or
inunctions with ointments of a similar natur
laxatives are sometimes beneficial. In very
the syrup of chicory has proved exceedingly
children and adults, from two to four gra
administered every morning, and two drachm-

ounce of the sulphate of soda in a pint of barley-water, have often produced a speedy improvement in the progress of the disease.

The sulphur douche is also occasionally useful, and when the disease spreads to the trunk and limbs, and is of an obstinate character, sulphur baths alternated with tepid emollient baths, should be prescribed. The application of blisters to the arms, as recommended by some writers, generally produces much irritation of the skin. In some rare instances, the eruption of impetigo larvalis seems to establish a certain degree of derivation, by means of which some severe internal disease is removed. Under these circumstances, and especially when the increase of the serous exudation coincides with the decline of the original disease, great care and caution are necessary in proceeding with the treatment. It is often desirable to confine the curative measures to simple palliatives and attention to cleanliness.*

* In infants and young children, the secretions from the bowels require attention, and when disordered, may be regulated by small doses of calomel, or of hydr. c. creta, followed by castor oil or some other laxative. I have also derived benefit in many cases from the continued use for some time of small doses of rhubarb and bicarbonate of soda, either with or without minute portions of ipecac, together with the warm bath, and a diet which must be regulated in conformity with the state of the digestive organs and the constitution of the patient. In protracted cases vegetable bitters will also do good—as will also some preparations of iron, of which the iodide answers best in some cases.

Phillips (*Lond. Med. Gaz., March*, 1840) speaks highly of the internal use of nitric acid in these cases, combined with sulphate of magnesia, and given in barley-water. The state of the gums must always be watched.

Any other local treatment than emollients must be abstained from in the early and acute stage of the disease. When this has passed, topical remedies of a more or less stimulating nature may often be used with advantage, if properly suited to the irritability of the scalp in each case, and care is taken to keep the bowels in an open state—of these, the dilute citrine ointment, ointments of creasote, and of ioduret of sulphur, are among the best. Phillips is partial to the use of a lotion of dilute nitric acid in some emollient decoction. An oiled silk cap is useful to protect the parts from changes of temperature and to promote the favorable action of topical remedies, as well as for the purpose of cleanliness. In some cases, however, it cannot be borne, on account of its increasing the heat and irritability of the parts.

Astringent lotions are sometimes very useful. M. Cazenave recommends elsewhere the following:—℞ infus. red roses, ℥ vj.; sulph. zinc, 12 grs.; laudanum, 3 ss. He has the part wiped gently after each lotion, and then sprinkled with a little dry starch. If this does not answer, he uses the following:—℞ infus. red roses, 1 pint; tannin, 45 grs.

In acute impetigo of the face, Dr. Neligan advises leeches behind the ears, mild saline cathartics, and a wash of 3 ss. carb. soda, and ℥ ss. of glycerine to a pint of elder flower water, and an ointment of 3 ss. of bicarb. soda, and 3 j. of glycerine to ℥ j. spermaceti cerate.

When chronic, he gives minute doses of iodide of mercury internally, and applies locally an ointment of sulphate of iron, 2 to 5 grs. of the dried sulphate to ℥ j. of cerate, using at the same time the above alkaline wash. In cases where this is too stimulating, he says that the best application is a lotion of acetate of zinc 12 grs.,

Impetigo granulata is characterized by the presence of small, isolated, greyish scabs, of an irregular form, on the posterior part, or on the centre of the hairy scalp. These scabs resemble the debris sometimes observed on the thick incrustations of *porrigo scutulata*, and also certain forms of *impetigo larvalis*, of which *I. granulata* is but a variety. They succeed small pustules, which are usually scattered irregularly over the scalp. Children and young persons are more subject to this disease than persons advanced in years. It occasionally attacks adults. Its usual seat is the posterior part of the scalp, but it may spread over the whole of it.

Symptoms.—Impetigo granulata is known by the appearance of a number of whitish-yellow pustules, accompanied with pretty smart inflammation and considerable itching. They are traversed in the centre by a single hair, and burst in from two to four days, when a copious exudation takes place. Rough, brownish scabs are then soon formed, in which the hairs are matted together. After a certain period, when these scabs dry, they present certain peculiarities which distinguish this variety. They are hard, uneven, and embossed, and assume a brownish or dark grey color. Small, dry, friable, irregularly-formed incrustations become detached and remain scattered through the hair, which projects from them. The hairs are never destroyed, but when the disease spreads they are found united in groups by the agglomeration of the scabs. A disagreeable nauseous odor is given off, and quantities of lice are seen in the midst of these scabs and in the hair. This odor never exists except in very filthy patients. In more cleanly persons, the scabs frequently do not present their distinctive characters, and resemble very much those of I. sparsa. The duration of this variety is very variable; it rarely exceeds a few months. When left to itself, it often persists for a longer period; but if appropriate measures be had recourse to, and in many cases attention to cleanliness is all that is required, it will terminate in the course of a few weeks.

Causes.—Impetigo granulata is not contagious. Poverty, filth, and privation of every kind, are its predisposing causes. It is not met with so frequently as the other varieties, a fact which is readily explained by the instability of its peculiar characters, depending for the most part on a particular condition of the eruption.

glycerine 3 ij., and distilled water ℥ viij., which, he says, is especially useful in chronic impetigo of the scalp.—(*Dublin Quart. Journ., May*, 1851, p. 335.)

H. D. B.

Diagnosis.—The diagnosis is not difficult when rough, brown, or dark-grey scabs, resembling small pieces of dirty plaster, can be seen on the scalp. There are cases, however, in which porrigo scutulata appears with similar incrustations, and many of the characters of I. granulata appear also to belong to *porrigo scutulata.* The first, however, never presents those large, thick, and continuous incrustations which accompany porrigo in this stage of its course. Besides, if the scabs are removed, the circular form of the patches, and the nature of the pustules of the last-named affection, will readily distinguish it from the other. Impetigo granulata is never contagious, and never permanently destroys the hair. The color of the scabs and their cupped appearance in *porrigo favosa,* independent of other characters, are always sufficient to prevent any mistake on this point. It will be more difficult to distinguish I. granulata on its first appearance from I. larvalis and other varieties of the same order, for the pustules and scabs are almost the same.

Prognosis.—This affection, generally speaking, is not very severe. It is often rebellious and obstinate, although less so than the other varieties.

Treatment.—Our first exertions should be directed to removing the scabs, cutting the hair, and exposing thoroughly the diseased surface. Lotions and emollient applications are the only remedies that can be conveniently used at the commencement, but the patient should at the same time take diluents and laxatives. It is often necessary to continue for a considerable period the emollient applications.* When the inflammation of the scalp diminishes, alkaline preparations will be found very beneficial. Lotions and the sulphur douche, &c., may often be employed with advantage; in short, the treatment of impetigo larvalis will answer likewise in this variety.

ACNE.

SYN.—*Varus; Gutta rosea, or rosacea; Bacchia rosacea;* Copper-nose.

The name *acne* has been applied to this disease by the ancients, because it attacks both sexes at the period of puberty. It is a chronic pustular affection, characterized by small isolated pustules, with a hard, deep-red base, leaving behind small, red, circumscribed, hard tumors, very indolent

* A poultice of bread and milk, or water, or of ground flaxseed, sprinkled over with sulphur, will often remove the scabs more speedily than a common poultice. H. D. B.

and slow in disappearing, the seat of which appears to be the sebaceous follicles of the skin. It appears most frequently from the age of puberty to thirty-five or forty, but in general it is most severe in young subjects. Both sexes are equally subject to it. The parts most commonly affected are the temples, cheeks, nose, and forehead. It also appears on the neck, shoulders, and front of the chest; but the back and upper part of the trunk is, perhaps, the most frequent seat of the disease. Acne occurs on the back in a number of individuals without appearing on the forehead, cheeks, &c.; and on the other hand, when it appears on the face, the back is rarely attacked. The limbs are never affected unless in those instances where the disease spreads over the body, when the backs of the arms are sometimes studded with pustules.

Willan admits three varieties of acne, each having certain characters of its own. It is, however, impossible to draw well-marked lines of demarcation between them; for the same individual may be affected with them all at the same, or at different periods. These varieties are *acne simplex*, *acne indurata*, and *acne rosacea*. *Acne punctata*, described by the same author as a distinct variety, is merely a complication of the two first, and the tumors consist in a collection of morbid matter in the sebaceous follicles. These follicles open in a blackish point, and the whole appearance gives to the disease a peculiar character. Biett has described another variety, *acne sebacea*, which is now admitted by most writers.

Acne has been regarded by Willan and Bateman as a tubercular disease. The circumscribed indurations of the skin which have received the name of tubercles, and which are so frequently met with in this disease, are merely the terminations of the pustule, and not an elementary lesion. The pustules of acne appear to be the result of inflammation of the sebaceous follicles, which is produced and kept up by the accumulation of the matter secreted by these follicles.

Symptoms.—1. *Acne simplex* chiefly affects young people about the age of puberty. It appears on the sides of the face, or on the forehead; and is often seen on young girls at the time of the first appearance of the menses. Young and robust individuals, in the enjoyment of perfect health, are often affected with this variety, covering more or less of the shoulders and upper part of the chest. The pustules ordinarily appear one after another in the form of small inflamed spots, which soon become pustular, their base being surrounded with a red areola. They pursue their course singly, without any general symptoms, and usually without pain or local irritation. Indeed, an eruption of considerable extent

frequently exists on the back of the patient without his being aware of it. When the disease appears on the forehead in young girls, the pustules are developed simultaneously and in variable number; the face is sometimes covered over with them. In general, when there are many present, the skin appears oily and shining, and suppuration takes place about the eighth day. The pus is formed in small quantity, and produces very thin scales, which soon fall off, and are often scarcely perceptible. In other instances, the suppuration is more abundant, especially when the disease is seated on the back, and thick scabs form, which are soon rubbed off by the friction of the clothes. Even when the pustules are set close together, they never form those broad, thick incrustations sometimes seen in sycosis. A slightly-elevated red spot remains after the fall of the scab, which gradually disappears. In some instances the redness and tumefaction continues; and, if other pustules are developed at the same time, the disease may present all the characters of acne indurata. The pustules of acne simplex are often intermingled with small, prominent, blackish points, formed by the sebaceous matter in the follicles; hence the name *acne punctata*.

2. In *acne indurata* the inflammation extends through the follicles. Suppuration proceeds more slowly, and slight indurations of the subcutaneous cellular tissue, of more or less extent, are formed by the union of four or five inflamed follicles. These tumors are sometimes as large as a filbert. This variety generally appears on the face, but it is also often met with on the back, and we have frequently seen it at the hospital of St. Louis occupying the whole of the posterior part of the body. It often appears in this region in young men. Sometimes it appears in robust and healthy individuals; in other instances, in boys addicted to onanism, and also in persons subject to irritation of the bowels. Individuals whose business compels them to remain long in a stooping position, and who are much exposed to heat, are very subject to this variety of acne. It may assume a mild character, in which event a few inflammatory points appear on the temples and cheeks; a pustule gradually rises here and there, and suppuration is not completed for two or three weeks, or longer. New pustules form and suppurate in the same manner as the first, the bases of which remain red and hard, and terminate in chronic indurations of the cellular tissue beneath. The eruption may thus be confined to a limited extent.

But in other cases it is much more intense, and the features are greatly distorted. The face is then studded with

livid red indurated tumors; they are most numerous along the margin of the lower jaw, on the temples, on the side of the face and nose. A number of pustules are scattered between these indurations, and also over other parts of the face. Red patches and slight scabs are sometimes met with. The skin covering the face is red all over, but this redness is greater on some parts than on others.

Instead of these symptoms, however, a multitude of black points often appear on the nose, the cheeks, and in the intervals between the pustules and the indurated tumors. The skin is then shining and unctuous, the cellular tissue is hypertrophied, and the deformity extreme. Nevertheless, the patient's general health is not impaired; he merely complains occasionally of headache and an unpleasant itching about the face. When this variety is confined to the back, it may assume a mild character, or else be attended with all the symptoms just mentioned, with the exception of those of the face. The duration of the eruption is in this case also very protracted. It disappears very slowly, and is liable to return again The pustules of acne indurata frequently leave numerous indelible oblong cicatrices, crowded together on the back, as if produced by repeated eruptions.

3. *Acne rosacea* differs from the preceding variety in appearing generally in persons of advanced years, and being accompanied with a certain degree of erythematic redness of the face.

It frequently occurs in females at the critical period, in drunkards, *bon-vivants*, and in studious persons; also in individuals subject to hæmorrhoids; and it often results from hereditary predisposition. In the latter event we often find, after exposure to the heat of the sun, or from excess in diet, or violent exercise, a number of irregularly circumscribed red spots on the face, sometimes confined to the cheeks, sometimes extending over the whole of that region, which gives it a very peculiar appearance. The deep-red color, however, is evanescent. Several scattered pustules are developed at the same time.

In elderly people, the nose is the most frequent seat of this affection. Its point assumes a violet-red color, after the slightest excess in diet, or often after a moderate and simple meal. By and by this redness becomes habitual, and imparts a very peculiar expression to the countenance. Pustules form here and there, but suppuration does not take place, or else it is very incomplete, and the redness is deeper in the neighborhood of the pustules. The disease is sometimes confined to the nose, which, in the course of a short time, acquires

considerable size. The veins become varicose, and form bluish irregular lines, which contrast with the intense red or violet color of the diseased surfaces. The appearance of the nose, however, is more frequently altered than its size. The eruption spreads to the jaws, the forehead, the chin, &c. The red color is not equally bright in all parts; it is most strongly marked in the neighborhood of the pustules. Suppuration is always slow and incomplete, more or less induration remains, and the skin continues injected. When the disease continues for some time, the tegumentary covering of the face becomes rough and coarse; and even when it subsides, the parts seldom or never resume their natural condition.

Acne rosacea is very often connected with some chronic gastro-intestinal affection, or with disease of the liver, &c. The redness is more evident in the evening and after dinner than at any other period. Finally, the disease may disappear and return, in the same individual, with various degrees of intensity. The pustules are very numerous, and the yellow color of their apices contrasts strongly with the violet hue of the surrounding skin. The features are in all cases altered considerably, and the appearance of the patient is often very repulsive. In addition to the causes already mentioned, mental excitement, cold drinks, irritating local applications, cosmetics, and everything that tends to produce a determination of blood to the head, will produce this disease in persons predisposed to it.

Acne sebacea, first described by Biett, is a purely follicular disease, in which the surrounding skin is scarcely ever involved. The face is the principal seat of this affection, but it may extend to the whole tegumentary envelope. When the follicular inflammation is confined to a limited surface, the skin does not lose its natural color, but is greasy and unctuous in the neighborhood of the eruption. The local irritation, however, soon increases, as also the morbid secretion, which becomes effused on the skin, and forms a sort of squamous incrustation of various extent.

During the first few days this scaly formation is soft, slightly adherent, and may be easily raised; but it soon acquires greater consistence, and cannot be detached without producing a certain degree of pain. The skin beneath is red and irritable, and the follicular ducts examined with a glass, appear dilated, and sometimes obstructed, by the thickened sebaceous matter. The crust is occasionally detached spontaneously, especially in summer, when the skin is moistened with a free and copious perspiration. In other instances it remains firmly adherent for months; particularly when it

appears on the nose. After a certain period the incrustations become black, and present a very singular appearance, which may explain the mistakes that have been committed with regard to the nature of this affection.

The follicular inflammation rarely ever extends to the cutaneous tissue. Even in its most severe form we never find any of those elementary lesions already described. However, it may become so intense as to alter the appearance of the sebaceous matter to that of the sero-purulent fluid of *eczema*. We have seen, in M. Biett's wards, several patients with these incrustations on the forehead, having a very close resemblance to those of eczema impetiginodes. The skin evidently presented the same appearance as it does in simple inflammation of the follicles.

The duration of this disease is very variable; we have occasionally observed it decline in the course of a few weeks, and we have also seen it continue for years. It occurs most frequently during the periods of adolescence and puberty; never in infancy or old age. Persons of a sanguineous or lymphatic temperament appear to be more predisposed to it than others; or, at least, it is never seen except in persons of a fine, delicate, white, unctuous skin. It frequently appears in young women immediately after child-bed. M. Biett had a patient under his care for a considerable time, a country-woman, aged 28, in whom the follicles of the entire skin were inflamed. The eruption terminated in thick, permanent incrustations. This patient was suffering at the same time from general articular rheumatism.

In some cases, certain conditions of the atmosphere may contribute towards the development of follicular inflammation. Thus, for example, M. Biett relates the case of a merchant of Nantes, a patient of his own, whose face became rapidly inflamed after exposure to a sharp north wind for several hours. The face was tense and swollen for two days; the skin then became bathed with an abundant oily secretion, which was soon changed into thick brownish adherent crusts, covering the whole of the upper part of the face like a mask. How far this variety is influenced by food is not yet ascertained.

Diagnosis.—The diagnosis of acne is rarely difficult. The pustules of *ecthyma*, and the tubercles of *syphilis*, have been sometimes confounded with this eruption; but the pustules of acne are small, slowly developed, and are seated on a hard base, whilst those of ecthyma are large, superficial, never accompanied with chronic indurations, and terminate in thick, elevated scabs. The peculiar appearance of the *syphilitic pus-*

tules, which are surrounded with a copper-colored areola, and the broad, flat, and shining tubercles, deeply tinted with the same color, will suffice to distinguish syphilis from acne; in addition to which we have the accompanying symptoms of that disease. Besides, the syphilitic tubercles are invariably ulcerated at the summit, especially about the alæ of the nose and the commissures of the lips; and, moreover, the pharynx and soft palate generally present additional unequivocal symptoms. The cicatrices of acne indurata are oblong, whilst those of syphilis are small, round, and depressed. The former are also covered with swollen follicles, and the skin around them has an oily appearance.

During the early stage of *lupus*, when a few scattered tubercles only appear on the cheeks and nose, there may be some difficulty in distinguishing that disease from acne; but pustules never appear in the former disease, which invariably commences with tubercles. They are never surrounded with that erythematic hue which always accompanies acne when confined to those parts. They are larger, flattened, and of a rosy-red color, and are followed and accompanied with desquamation, and a certain degree of puffiness of the subcutaneous cellular tissue.

Acne sebacea has sometimes been confounded with *noli me tangere* by careless observers, and cauterization and excision have even been proposed for its cure. We have seen two cases in which the patients were in the greatest alarm from this serious error, and the disease terminated favorably, in the course of a few weeks, with the simplest remedies. When the inflamed follicles are numerous and diffused over a large surface, and the sebaceous incrustations are at the same time firm, thick, of a dark color, and in the form of imbricated scales, the disease may be confounded with some forms of *ichthyosis;* however, this mistake can be easily avoided by bearing in mind that the scales of the latter disease are deeply implanted by one of their edges in the skin, that they are dry and very adherent, and cannot be detached without being torn, which is never the case with the incrustations of acne. It is necessary to recollect these distinctions, as mistakes of this kind have occurred more than once.

Prognosis.—The prognosis will vary according to the variety of the disease present. Acne *simplex*, for example, is a mild affection, and never continues long. It generally disappears as the period of manhood approaches. Acne *indurata* is much more troublesome, especially when the eruption is diffused and intense. It often resists every method of treatment. Finally, acne *rosacea* is very rebellious and is

often incurable. The prognosis should be further guided by the length of time the eruption has existed, and by the age and constitution of the patient.

Treatment.—The treatment of acne varies, not only according to the variety of the eruption that exists, but according to the constitution of the patient and the causes and duration of the disease.

Acne simplex requires scarcely any treatment when the pustules are few; but, if the eruption is extensive, both local and general measures will be required. The diet should be restricted. The patient should abstain from wine, spirits, and coffee; and take in their stead whey, or an infusion of succory.* If the patient is young and vigorous, bleeding may be necessary, especially when the disease affects young females at the first appearance of the menses; and even then it will be useful to promote this discharge by local baths, the application of leeches to the upper and inner part of each thigh, or by directing warm vapor to the external organs of generation. Emollient applications, as an emulsion of bitter almonds, a decoction of bran or of quince seeds, and tepid milk, will be found very serviceable. When the chronic indurations remain after this treatment, they must be combated by other measures, which will be noticed in the following paragraph.

Acne indurata generally requires both local and general bleeding, even if the patient is not strong or vigorous. It should be repeated several times if necessary; and at the same time the diet should be restricted, and refreshing drinks prescribed.† Active measures are now required to hasten the resolution of the tubercles, and to convert the eruption from a chronic into an acute form. Lotions containing distilled rose water, with a little sage and lavender, and alcohol in the proportion of a third, a fourth, and even a half, according to the state of the eruption, may also be employed with advantage. Five or six grains of corrosive sublimate in half a pint of distilled water, with an ounce of rectified spirit, form another useful lotion in this variety of acne. Gowland's lotion, which is nearly the same as this remedy, with the exception of an emulsion of bitter almonds, which the former contains, is also very serviceable.

[* If the root of the common succory is cut into small pieces, dried, and roasted, it resembles coffee, and is sometimes a good substitute for it. It allays heat and irritation.]

† Our authors have subsequently so far modified their opinion respecting the abstraction of blood in acne indurata as to say that either general or local bleeding is often necessary, but say nothing of its repetition. We suspect that general bleeding is rarely required in this form of disease. The application of leeches may sometimes do good. H. D. B.

Frictions on the pustules and indurated parts, with an ointment composed of from a scruple to a drachm of the protochloruret of mercury to an ounce of lard, is also frequently attended with success. But by far the best remedy to promote the resolution of the induration is the iodide of sulphur, in the proportion of fifteen to twenty-four grains to an ounce of lard. We have seen this remedy attended with the greatest success in M. Biett's wards, and have had severe cases of *acne indurata* under our own care, in which frictions with the iodide of sulphur had the most surprising effect in dispelling the tumors. Baths, and especially the vapor douche, applied to the face for ten or twelve minutes, are useful adjuvants, and if administered judiciously, will obviate the necessity of having recourse to cauterization, either with the nitrate of silver or with hydrochloric acid. Moreover, it is very difficult to confine the application of the caustic to the exact spot for which it is intended; and if it penetrates too deeply, it will produce painful ulcerations, and often deep cicatrices.

When the eruption is confined within a narrow compass, the successive application of blisters may be advantageously had recourse to, with the view of altering the vitality of the skin.. We have seen at the Hospital of St. Louis this method attended with the greatest success. If new eruptions supervene during the treatment, and if there is great tendency to cerebral congestion, repeated bleedings and aperients should be prescribed according to circumstances. The latter ought to be suspended when there is much inflammation, when the indurations are painful, and the pustules numerous. On the other hand, they should be continued when the tubercles are hard, indolent, and of large size.

Drastic purgatives should be carefully avoided, as being not only useless, but frequently injurious. Mild laxatives may, in some cases, assist the operation of the other remedies, especially when the patient is strong, the intestinal canal healthy, and when there is a decided tendency of blood to the head.* Sulphureous waters, administered both internally and externally, are often very useful. They do not seem to produce much beneficial effect when mixed in the baths. Simple baths, at a temperature of 88° or 90° Fahr., are more effectual. The patient should take two or three every week. The cold sulphur douche has been employed with success by M. Biett,

* In their last edition, our authors say that purgatives, and more particularly laxatives, are useful auxiliaries in a great many cases. H. D. B.

when the eruption disappears, especially if it was accompanied with the small black points before mentioned.

Acne rosacea requires a somewhat different plan of treatment from that of the other varieties. In this case the bleeding should be local, and not general, in the majority of instances. As, for example, leeches ought to be applied in the neighborhood of the disease, behind the ears, to the alæ of the nose, &c.; but when females are affected at the first menstrual period, the abstraction of blood will be attended with benefit. This variety is very rebellious, and the topical applications so useful in acne indurata, are almost useless; they even become injurious in this form of the disease. The treatment of acne rosacea consists for the most part in hygienic measures. The patient should avoid excesses of every kind; he should lead a sober and regular life, and live on light food, fresh vegetables, succulent fruit, &c. He should also avoid fatiguing exercise, both of mind and body, mental excitement, and remaining long in heated apartments. Immersion of the limbs in warm water, containing two ounces of nitro-muriatic acid to eight or ten quarts of water, is a useful auxiliary. When the tubercles are indolent, the vapor bath should be applied to the face, and at the same time gentle friction or discutient lotions may be employed.

Acne sebacea can easily be overcome when the eruption is limited. M. Biett has often seen follicular inflammation give way in a very few weeks to the vapor douche, applied for fifteen or twenty minutes each time to the diseased parts. The incrustations speedily soften, and are easily detached. Those which reappear are in general thinner, less firm, and often fall off spontaneously. Narcotic lotions, rendered styptic after a short time by the addition of alum or of some vegetable acid, will contribute to hasten the cure.*

* The state of the digestive organs requires particular attention in all of the first three forms of acne, as does also the state of the menstrual function in females.

Laxatives and alkalies, with regulated diet and the warm bath, will frequently do much towards palliating, if not entirely relieving, the form of acne simplex, which is often so annoying to the young of both sexes. A combination of rhubarb, soda, and ipecac, in small doses two or three times a day, may be used for this purpose; to which may sometimes be added with advantage half a grain or more of quinine at a dose—and in some cases aloes may be substituted for the rhubarb. Sometimes blue pill or a small proportion of calomel may form part of a pill which may be substituted for this at bedtime, two or three times a week.

Dr. A. T. Thompson was partial to a combination of sulphate of zinc and liquor potassæ, 24 grains of the former to ʒ xij of the latter, of which thirty drops are to be taken twice daily, in a wine glass of water, the bowels being regulated at the same time.

Dr. Naligan recommends as the best preventive treatment in acne *simplex*,

MENTAGRA, OR SYCOSIS.

SYN.—*Varus mentagra; Mentagra; Dartre pustuleuse;* Chin welk.

Mentagra is characterized by successive eruptions of small acuminated pustules, closely resembling those of acnė, scattered upon the chin, and other parts occupied by the beard, the

washing the face with carbonate of soda instead of soap, and the application, immediately after the face is washed, of a lotion, consisting of 3 ij oil of lemon and 3 ss oil of rosemary in a pint of rectified spirit. He says that the pustules should be opened as soon as formed, and the curdy matter pressed out. (*Dublin Quarterly Journal*, May, 1851.)

M. Campardon says (*Rev. Méd. Chir. de Paris*, Avr., 1847) that the cure is remarkably promoted in this form of acne by anointing the affected parts every evening before retiring with an ointment of hydriodate of potash, and habitually using as a wash for the toilet, lime water diluted one fourth.

In A. *rosacea*, Alibert thought very highly of sulphur, both internally and externally. I have derived benefit from the use of sulphuret of potash in this form, as well as in A. *simplex*. It may be given in pills, combined with quinine and ipecac, and sometimes with aloes, or rhubarb and ipecac, or in solution with rhubarb and ipecac, or the fluid extracts of taraxacum, or of rumex acutus, or of sarsaparilla. It is in this form of the disease that the alterative effects of mercury sometimes produce a very favorable change; but, unfortunately, this improvement is too often only temporary. But little can be expected in a certain class of cases without an entire change in the habits of the patient, and they are generally of a nature which renders such a change almost hopeless.

Dr. Neligan advises the application of leeches behind the ears two or three times a week, at bedtime, in *acne rosacea*, when there is much inflammation present, and the daily use of some mild saline cathartic mineral water, an hour or two before breakfast. When the inflammation is subdued, if it exists, he commences the use of iodide of potassium in decoction of elm bark, adding, in very obstinate cases, an eighth of a grain of iodine to each dose. Locally, he applies at night an ointment of white precipitate, twelve grains to ʒ j spermaceti cerate, with three minims of oil of bitter almonds, and has it washed off in the morning with a lotion of carbonate of soda (3 ss to ʒ viij of water). When the skin of the face is hard and dry, and inclined to crack and bleed, he adds to this wash 3 ij to ʒ ss of glycerine. The diet must be carefully attended to, and exposure of the face to fire or harsh winds avoided. (*Dublin Quarterly Journal*, May, 1851, p. 330.)

M. Campardon says that there is in this form of acne a producing cause, which must be destroyed to prevent relapses, and when all the functions are restored to their natural state, he recommends to give, every day *fasting*, one tenth of a grain of tartar emetic, mixed with two or three grains of the powder of dulcamara, which, he says, even in this small dose, acts very decidedly on the face. The face to be washed several times a day with diluted lime-water, and compresses wet with this kept on the affected parts, cold in summer and warm in winter. Sometimes he substitutes Gowland's wash for this. When the redness of the skin begins to decline, he uses ointments of iodide of potassium and of iodide of lead. (*Op. Cit.*)

Dr. Neligan considers acne *indurata* as "in nearly every instance apparently an aggravated form of acne rosacea," and recommends the same general plan of treatment, using an ointment of iodide of sulphur (grains xv to 3 ss to ʒ j lard), preceded by the alkaline wash before each application of the ointment. (*Op. Cit.*)

M. Campardon says that the application every night to the tubercles of an ointment of chloride of silver (twelve to fifteen grs. to ʒ ss of lard and 3 ij of white

submaxillary region, and the lateral parts of the face. Mentagra is an essentially pustular affection. It has, however, been mistaken by Willan, Bateman, and Plumbe, who supposed that tubercles were the elements of the disease, whilst they are merely consecutive, and do not exist in all cases; and moreover the eruption is pustular from its earliest appearance.

Symptoms.—Sycosis most frequently occurs in adults, sometimes in persons of advanced age. It is generally preceded for several months, or even for years, by minor eruptions on the upper lip, on the chin, or submaxillary region, which quickly disappear. The pustules shrink, and are speedily replaced by thin scabs, which dry and fall off in a few days. At a more advanced period, the eruption becomes more abundant, and then it first attracts the patient's attention. It often appears immediately after a debauch.

The pustular eruption is generally preceded by redness, heat, and a painful degree of tension about the chin. Small red points soon make their appearance, which become pustular between the first and third days. The pustules are acuminated and usually distinct; but when they are numerous and

wax), hastens their resolution in a remarkable manner. He gives at the same time depurative decoctions of different kinds.

M. Cazenave recommends in his clinical lectures at St. Louis Hospital (*Gaz. des Hôp.*, Oct., 1850), ammoniacal lotions, the action of which, he says, is principally chemical, by their alkaline properties forming with the fatty matter contained in the follicles a soluble soap with an ammoniacal base. The forms of ammonia which he uses are the hydrochlorate and the acetate, the strength of the solution of which he varies very much, adapting it to the state of the eruption and the irritability of the skin in different cases. Our authors also say, in the last edition of their work, that they have met with the most constant success from the continued use of weak solutions of ammonia. He also continues to speak favorably of the use of sulphur baths.

I have used with good success in acne indurata the dilute nitric acid with a bitter tincture, in the following manner:—℞. Acid. nitr. dilut. ʒj; tinc. gentian comp. ʒiv. M. A teaspoonful to be taken three times daily, freely diluted with water, and in a way not to injure the teeth.

Lotions of sulphur, as of a solution of sulphuret of potash (3j or 3ij to a pint of water) have been found beneficial in acne *sebacea*. The following is a pleasant and efficacious lotion in that as well as in some other varieties of acne:—℞. Sulphuret potass., zinci sulphat. āā 3j; aq. rosar. ʒiv. M.: the strength of which may be increased or diminished to suit the particular case.

Local applications must be varied to suit the form of the disease, and its stage, and the irritability of the skin in individual cases. The free and continued use of emollient lotions is grateful and beneficial in all the forms. Astringent, sedative, alkaline, and sulphureous lotions of varied degrees of strength, all have their advocates, and all do good in certain cases, and can sometimes be alternated with advantage. Copland (*Dict. Pract. Med.*) praises very highly as a wash a solution of bi-borate of soda, in an emollient decoction. Iodide of sulphure ointment is very valuable for the removal of the indurations in A. *indurata*, and is also useful in modifying the state of the skin in the other forms, for which latter purpose creasote ointment is also useful in some cases. H. D. B.

grouped together, the upper lip and a great portion of the chin are covered with small prominent tumors, containing a yellowish fluid, and traversed through the centre by a single hair. They remain in this condition for six or seven days, giving to the countenance a very peculiar appearance, and at length burst, and terminate in slightly-thickened, brownish crusts; but there is never any exudation, as in impetigo. The scabs fall off imperceptibly, and the disease subsides altogether in the course of ten or fifteen days, if a new eruption does not break out.

It usually appears in the form of successive partial eruptions. The skin becomes inflamed, either in isolated patches, or over an extended surface. When the eruption is general and extensive, the subcutaneous cellular tissue, as well as the skin, is deeply inflamed. There is considerable heat and pain, and even the scabs are in some cases thickened and matted in the middle of the hair. The extent of the eruption is variable; it is sometimes confined to the upper lip, to one side of the chin, to the side of the face, or it may appear at once in all these regions. Frequently a number of pustules form, and disappear, and are replaced by others at different intervals. In these cases the skin is rough, the epidermis is elevated in the form of small whitish exfoliations, in the centre of which new pustules are occasionally developed.

There is another rather peculiar variety of the complaint, which appears in old people, and in persons whose constitutions have been deteriorated by dissipation or disease, but who are apparently strong and healthy, characterized by chronic tubercular indurations of the skin. These tumors are of variable form and size. They are sometimes almost as large as a cherry. In other instances, even after the development of the eruption, the inflammation continues to increase in intensity, and pustules, scabs, scales, and tubercles cover the lower part of the face, which is swollen and puffy. They appear on every part of the face where the hair grows, and pustules frequently form on those tubercular indurations; but Mr. Plumbe was not correct in saying that the latter contain pus. The cellular tissue is sometimes deeply involved, especially when the inflammation is intense.

When the disease has continued for some time, the bulbs of the hair generally become affected, and the beard often falls off to a considerable extent; but it generally reappears when the disease subsides, and soon resumes its original strength and color. The indurations gradually disappear after the eruption has ceased. The parts which have been affected continue of a reddish or violet color, and slight epidermic

exfoliation often takes place for some time. The duration of the disease is very variable. In some cases it resists every kind of treatment, and continues for an indefinite length of time. It is also very apt to reappear, particularly in persons fond of good living.

Causes.—Mentagra chiefly attacks young people of a sanguineous and bilious temperament, and those who have much beard. It generally appears during spring and autumn; and persons who are exposed to strong heat, as cooks, smiths, founders, &c., are particularly liable to be attacked. Women are rarely ever affected. The poor, who neglect cleanliness, and indulge in excess of different kinds, often suffer from it. The better classes, and persons of cleanly habits, are, however, also liable to it. This disease has been often attributed to the use of a dirty razor, but seemingly without much foundation. Nevertheless M. Foville has seen several of the inmates of the lunatic asylum at Rouen attacked successively with mentagra after being shaven with the same razor. It is evident that the action of the razor will aggravate the irritation of the parts when once the eruption is formed.*

Diagnosis.—The differential diagnosis of mentagra is very important. Various eruptions appear on the chin, which may be mistaken for it; as, for example, *ecthyma*, *impetigo figurata*, and *syphilitic tubercles*. In *ecthyma* the pustules are larger, and the bases more inflamed than in mentagra. *Ecthyma* is never accompanied with the circumscribed indurations of the skin and cellular tissue; and its scabs are broader, thicker, and more adherent. The pustules of *impetigo figurata* are disposed in groups, and are but slightly prominent, whilst those of mentagra are distinct and acuminated. The pustules of *impetigo* burst about the third or fourth day, and give issue to a considerable quantity of fluid, which is promptly converted, by desiccation, into broad, thick, yellow scabs. Those of mentagra burst between the fifth and seventh days, and are succeeded by dark brown, dry, and thin crusts. Besides, the tubercular indurations of mentagra are never observed in impetigo. These characters may be very difficult to recognise when the eruption is extensive, the inflammation severe, and the pustules more or less

[* M. Gruby has recently presented a memoir to the Academy of Sciences, Paris, on a new species of cryptogame, which occupies the roots of the beard, and forms a species of contagious mentagra. The disease generally occupies the chin, lips, or cheeks; the affected parts are covered with greyish and yellow scabs, formed by the epidermic cells, under which is the root of the hair, surrounded completely by a sheath of cryptogamia; the latter are not elevated above the surface of the epidermis.—B.]

agglomerated. It will then be judicious to suspend our opinion until the disease is more advanced.

Syphilitic pustules are distinguished from those of mentagra by the absence of heat, pain, and tension. They are but slightly elevated, are situated on a copper-colored or violet base, and are developed slowly; while the pustules of mentagra are acuminated, and rest on a bright red base; besides, syphilitic pustules rarely occur on the lower part of the face only, but commonly appear on the alæ of the nose, on the forehead, and at the commissures of the lips. *Syphilitic tubercles*, which appear only to affect the superficial layers of the cutis vera, differ from the chronic indurations of mentagra, which are conical, and deeply seated in the skin, by their shining and dull coppery color; besides, there are always some local or constitutional symptoms present which will readily distinguish them. Sycosis can hardly be confounded with *furuncles*.

Prognosis.—Mentagra never terminates unfavorably; but the physician should always be guarded in giving an opinion as to when the disease will disappear, or else he will often be deceived. The more frequent and successive the eruption, the longer the duration of the complaint.

Treatment.—The first indication in the treatment of mentagra is to remove the causes which excite the disease; as for instance, when it affects intemperate persons, or those who are exposed to strong heat, the patient should guard against these exciting causes. The razor should not be used for a certain time, as it increases the irritation, and the beard may be cut with a pair of scissors. When the inflammation is severe, the application of leeches behind the ears, or on the submaxillary region; and when the patient is vigorous, general bleeding, together with emollient fomentations, and poultices of potatoe-flour, or crumb of bread, cooling drinks, and attention to diet, are the most useful measures that can be adopted. The use of local bloodletting, and especially of emollients, should not be confined to cases which are strictly acute; but these means will often be of great service, even in chronic cases, with induration of the skin, when there is inflammation at all active. Laxatives, as the acetate of potass, calomel, sulphates of potass, of soda, and of magnesia, are beneficial when there is no gastro-intestinal irritation present. They should be continued for some time.

When the disease is of long standing, the tubercles large, and the cellular tissue involved, we must have recourse to friction with ointments of the ammoniacal protochloruret of mercury, or of the deutoxide or subsulphate of mercury. To

these may be added, with advantage, the vapor bath, or vapor douche. We have frequently seen cases at the hospital of St. Louis, in which these remedies had the most happy effects in dispelling the tubercular indurations. If the eruption recommences, the friction should be suspended for a short period, if it is abundant; but if only a few pustules appear, it may be continued.

Cauterization with nitrate of silver, or the strong acids, is not a desirable remedial measure. It should never be employed unless in cases where the disease has assumed an inveterate chronic character. When all these remedies fail, we have often succeeded with tonics, the preparations of iron especially. M. Biett has administered the muriate of gold in doses of a one third, and afterwards a half of a grain each, rubbed into the tongue, with remarkable success. The mercurial preparations, and particularly Larrey's syrup, have sometimes effected a perfect cure.*

PORRIGO.

Willan and Bateman have confounded several cutaneous diseases of different kinds under this head, and thereby have added much to the difficulty of studying and distinguishing the various disorders to which the scalp is liable. They have described six varieties: *P. larvalis*, *P. furfurans*, *P. lupinosa*, *P. scutulata*, *P. decalvans*, and *P. favosa*, some contagious and some not, under the title of porriginous eruptions. Four of these are impetiginous, or squamous affections.

* The treatment may often be commenced with advantage by the exhibition of free mercurial cathartics every second or third night for a few times, which may be followed up for some time by alterative laxatives.

The vapor of warm water will be found to have a soothing effect, even in the acute stage, and is particularly serviceable in aiding to remove the indurations remaining after that stage has passed. In conjunction with this, and after using it fifteen to twenty minutes two or three times a day, ointments of iodide of potassium, or of iodide of lead, or of sulphur, and calomel ointment may be applied. The use of these must always be discontinued when any irritation is produced.

The application of a strong solution of nitrate of silver is sometimes productive of good results, and collodion will, doubtless, be found useful in some cases of this disease, as it is in the analogous disease of acne. Blisters are recommended by some writers.

Willis says that the hair whose root is affected must always be extracted, and that he has seen more than one case of mentagra yield to few means beyond tepid bathing, and the extraction of loose and dead hairs, which had long resisted constitutional means of every kind.

The internal use of iodide of potassium or of iron, will also often materially aid in the removal of the indurations, especially in patients of strumous diathesis.

H. D. B.

Their *porrigo favosa* is a variety of *impetigo;* and the same is true of their *P. larvalis.* Their *P. furfurans* is, in some cases, a *pityriasis capitis*, and in other cases a chronic *eczema*, the thin scabs of which are formed by the drying up of a fluid which slowly exudes from the scalp: and their *P. decalvans* is a partial *alopœcia*, which is often a sequel of different forms of disease. *P. scutulata*, or ring-worm, and *P. favosa*, the *P. lupinosa* of Willan, are different from all the others, as M. Biett first pointed out, by their peculiarly-formed pustules, and their contagious nature. They are essentially fundamental diseases, and the whole of the porriginous eruptions of Willan may be reduced to these two, *P. favosa* and *P. scutulata.*

The elementary lesions of this order are favous pustules, which exclusively belong to it. They are small, perfectly rounded, and imbedded in the epidermis; they contain yellowish straw-colored matter, which soon concretes, presenting a depression at the centre, which may be detected in the nascent pustule with the aid of a magnifying glass. In the course of a few days, this yellow matter is converted into thickish cellular slightly prominent scabs, which go on increasing for some time, and which are sometimes pitted or umbilicated in the centre, and at other times lose this character, and are of a greyish yellow color, thick, and often very hard.

These diseases are therefore distinguished from all others by an eruption of *favous* and *contagious* pustules, generally developed on the hairy scalp, but which may appear on other parts of the body. Children are more subject to them than adults; but they often appear in full-grown persons, and are generally the result of some peculiar disordered condition of the economy. They are sometimes produced by uncleanliness, poverty, bad nourishment, and intense grief. They may also be propagated by contagion. The seat of the favous pustules has been alleged by many dermatologists to reside in the *corps reticulaire.* Duncan places it in the bulbs of the hair, in consequence of the latter being so easily removed when the pustules are new. Still, it is evident that the bulb is only secondarily affected; and the true seat of the favous pustules appears to be at the extremity of the piliferous duct. We shall now describe these two varieties individually.

PORRIGO FAVOSA.

SYN.—*Tinea; Favus; Porrigo lupinosa; Tinea favosa; Tinea rugosa.*

This is the most frequent variety, and is characterized by an eruption of very small, flat, deep-seated umbilicated pustules, which soon concrete, and form small, bright yellow and very adherent scabs, which retain the umbilicated appearance of the pustules. The scabs gradually increase, always preserving the depression in the centre, unless they coexist with other incrustations, when the disease is not so easily detected; and they are highly contagious.

The hairy scalp is the special seat of this affection, but it may appear on the forehead, the temples, the chin, and eyebrows. It generally begins on the scalp, and spreads thence to the other mentioned parts. We have frequently seen it, at the Hospital of St. Louis, on the shoulders, on the scapulæ, on the elbows, forearm, and on the knees, the upper part of the legs, thighs, and on the scrotum. It sometimes appears on the back and abdomen, and on the hands, in which latter instance it is generally the result of contagion.

Symptoms.—Porrigo favosa commences with an eruption of extremely small yellow pustules, hardly perceptible the first day, looking like small yellow points; they are always on a level with the skin, and seem to be set or imbedded in the epidermis. They are scarcely formed when the yellowish fluid begins to concrete, and a slight depression appears in the centre, which gradually increases, and is very distinct about the fifth or sixth day. The pustules are generally distinct at the beginning; sometimes, however, they are clustered together, and become confluent, forming a continuous scabby surface, of some extent. Their appearance is always accompanied with smart itching. When distinct, they are usually seated on an elevated and slightly inflamed base, and each pustule is generally traversed by a single hair. The scabs slowly increase, preserving their circular form, and the central depression, which becomes more and more marked; they thus reach the extent of several lines, and M. Biett has seen them more than an inch in diameter.

When the pustules are set close together, they often unite, and form large incrustations on the surface; and the honeycomb depressions corresponding to the primitive pustules, are easily distinguished. Sometimes the whole head is covered with a kind of scabby cap; again, some detached pustules

appear here and there, terminating in slight desquamation. If the scabs are removed at this period by means of poultices or any kind of washes, slight erosions are seen beneath, which do not become covered with new crusts; for the formation of these, new pustules are necessary. When the disease is left to itself, the scabs continue for months and years; they become thick, whitish, and brittle, and split in various directions. It often happens, that while they are thus disappearing from one part, new pustules are forming in other places, which pursue the same course. The hair of the affected parts may be easily pulled out by the roots from the commencement of the disease. If it is, however, of long standing, the hair falls off spontaneously, and leaves behind bald, smooth, shining patches. When the hair grows again, it is generally thin, woolly, weaker, and of a lighter color than the original.

This affection is never accompanied by febrile symptoms, but a troublesome and annoying itching is often present during its progress, which is aggravated by want of cleanliness. A number of lice are often seen under the scabs, causing the patients to scratch themselves, and by this means increase the inflammation. In these cases there is a strong disagreeable odor, similar to that of cat's urine, given off from the head. After the head is cleansed from the scabs, the odor becomes sickening. The excoriations on the surface, which often reach to the hair-bulbs and thus produce baldness, are not covered with the regular cup-shaped favous pustules, but a reddish and fetid sanies oozes out, which concretes into irregularly-shaped scabs. Fresh pustules, however, soon appear, which give rise to fresh favous scabs. Small subcutaneous abscesses may sometimes appear, accompanied with sympathetic engorgement of the lymphatic glands of the neck. It is rarely complicated with internal organic disease. It has been remarked, that the growth of those persons who have been affected with porrigo is often arrested, and the development of the mental as well as of the physical powers, is slow and imperfect. The duration of the disease is very variable and uncertain; and the hair, when reproduced, is rarely the same as the original, either in color or consistence.

Causes.—Porrigo is an essentially contagious disease. In some instances, however, it is impossible to transmit it by contagion. It appears at every season of the year, and attacks both sexes and all ages; but children and young persons much the most frequently. Individuals of a soft, lymphatic, and scrofulous constitution, are eminently predisposed to it, although it sometimes occurs in healthy and vigor-

ous subjects. The other exciting causes have been described in the general observations at the head of this chapter.

Diagnosis.—The peculiar appearance of the pustules and incrustations of porrigo favosa will prevent it from being confounded with any other pustular eruption of the scalp. When the scabs are in abundance, they are of a yellowish white color, dry, and sometimes crumble into powder. The disease then resembles *impetigo granulata*; but there are always some favous pustules present, which will clear up the diagnosis, and the hair invariably falls off in the former affection, a circumstance which never occurs in *impetigo granulata*. It has been mistaken for other diseases; and we have seen it, when extensively diffused, confounded even with *lepra*; but the most superficial acquaintance with the characters of favus would have prevented any mistake of this kind.

Prognosis.—The prognosis of this affection is unfavorable with regard to its duration, which is often prolonged for a considerable period by the development of new eruptions as soon as the original have disappeared, and also on account of the baldness which it occasions.

Treatment.—The treatment of porrigo favosa is altogether local, although in some cases it may be necessary to recruit the patient's strength with bitters, tonics, &c., and to administer a few mild laxatives.

The first step to be taken is to cleanse the scalp thoroughly, to clip the hairs close with a pair of scissors, or to shave them off, and to remove the incrustations by the frequent application of tepid emollient fomentations, which may be alternated with soap washes. These measures, simple as they may appear, are highly efficacious in the treatment of favus, and many cures which have been attributed to other remedies, belong in reality to them. They are not alone, however, in general sufficient to remove the disease. Recourse must be had to more energetic measures, with the view of altering the condition or vitality of the skin from disease to health. The presence of the hair does not seem to be so injurious as some writers allege; nor is the disease arrested as soon as it is removed. On the contrary, the scabs continue frequently for years on parts devoid of hair: neither is the removal of the hair from the diseased parts with a pair of small forceps so painful an operation as some people suppose: for the skin about the roots is soft and tumid, and the hair is easily detached. Alkaline preparations are very advantageous in these cases: they modify the condition of the skin as well as promote the removal of the hair.

In addition to the foregoing remedies, alkaline and sulphur

ointments, and acidulated lotions, will be found to be the most effectual measures that we can employ in porrigo favosa. The alkaline preparation should vary according to the circumstances of the case; for example, when it is desirable to remove the hair at once, and at the same time to stimulate the scalp, the subcarbonate of potass or soda, in the proportion of one or two drachms to an ounce of lard, should be rubbed over the diseased parts for five or ten minutes every day. Alkaline lotions in the proportion of two drachms of the alkali to a pint of water may be used at the same time. After a certain period, the hair will begin to fall off. Before having recourse to these remedies the hair should be cut, the incrustations removed as much as possible, and the scalp cleansed in the manner already directed.

We have often employed the sulphuret of potass, in the proportion of one or two drachms to a pint of distilled water, at the hospital of St. Louis, with much advantage, and also Barlow's lotion. The chloride of lime has been frequently used with success in these cases. Mild sulphur douches repeated every day, will fulfil the object in view still better. Great patience is necessary during the treatment, and care should be taken that these measures are followed out exactly. Dilute nitric and muriatic acids have in some cases been employed with success, but these may be advantageously replaced by a lotion composed of one drachm of dilute sulphuric acid to a pint of distilled water.

Solutions of sulphate of zinc, of copper, of the nitrate of silver, or of the deuto-chloruret of mercury, have been sometimes used with much benefit, to which may be added two or three ounces of alcohol to a pint of water. Ointments composed of two drachms of sublimed sulphur, with the same quantity of white soap, to an ounce of lard, and of calomel, or the oxide of manganese in the same proportions, have been often recommended. But amongst all other remedies, the ioduret of sulphur ointment, first employed by Biett in the treatment of porrigo favosa, merits our greatest confidence. We have seen it in the course of a few weeks alter the condition of the skin in old cases, prevent the formation of new pustules, and cause the hair to be reproduced with its original characters and appearance. The ointment should be rubbed gently over the parts affected every night and morning. During the use of all these different means, the scabs should be removed as soon as they form, by means of the continued use of emollient and alkaline lotions. Baths are always useful in these cases, especially when the disease appears upon the trunk or limbs. Sulphur baths are very efficacious in some

instances. The utmost cleanliness should be observed all along, and the fluid which exudes from the excoriations should not, if possible, be allowed to touch the sound skin.*

In obstinate cases, cauterization with the nitrate of silver or some diluted acid, has been attended with success. After the scabs are removed, and the scalp well washed, the acid should be passed quickly over the surface with a feather, and water poured immediately on the parts, to prevent the action of the caustic extending too deeply. In the treatment of *P. favosa,*

* The list of local applications recommended in porrigo is of discouraging length, and affords sufficient proof, if any were needed, of the great obstinacy of the disease.

I have derived the most benefit from ointments of creasote and of iodide of sulphur, the former, 20 to 30 minims to ʒj of lard; and the latter ℈j to 3ss to ʒj; and am in the habit of directing their application morning and evening, and to have the head thoroughly washed before each fresh application with an alkaline wash, such as carbonate of potash or of soda. The oiled silk cap should be constantly worn, unless it causes too much irritation. An ointment of sulphur and carbonate of soda proved successful in a case lately under treatment, which was not, however, of very long standing. Wilson has used the iodide of sulphur with success in the form of a liniment, 3ss to ʒj olive oil, gently rubbed over the scalp night and morning, after having previously washed the part with warm water.—(*London Lancet, Feb.* 1840.) In his work on diseases of the skin (Phil. edit, 1847, p. 396), he says, that he has been most successful in favus with iodine, either in the form of vapor, applied twice a day, or tincture of iodine, brushed upon the scalp three times a day, in the morning and evening after each ablution. Next to iodine, he prefers a spirituous solution of bichloride of mercury, pencilled on the patches, with which, he says, he has frequently succeeded in checking the disease at once.

Dr. J. H. Bennett, of Edinburgh, recommends the internal use of cod-liver oil, and also its application with a soft brush or dossil of lint to the whole scalp, morning and night, after the crusts have been softened and removed by poultices, and the head shaved, and then covering the head with an oiled silk cap, the head to be occasionally washed gently with soft soap and a sponge, when any accumulation takes place —(*Treatise on Cod-Liver Oil,* Edin., 1848.)

For an interesting lecture on Favus, by Prof. B., taken from the *Monthly Jour. of Med. Science* for July, 1850, see *Braithwaite's Retrospect* (Amer. Rep.) for Jan., 1851, p. 238.

Dr. Neligan gives iodide of arsenic in this disease, which, he says, may be given with safety to the youngest child. Dose for an adult from 1-10 to ¼ of a grain, very gradually increased; for a child six years old, 1-15 of a grain; and for a younger child, 1-18 to 1-20 of a grain. Locally, he uses poultices and alkaline washes and ointment to remove scabs, and afterwards the iodide of lead ointment. —(*Dublin Quar. Jour. Med.,* Aug., 1848.)

All the different applications mentioned in the text have had their advocates, and each may be useful at times. But I have thought alterative and mildly stimulant topical remedies more effectual than the powerfully irritating ones. It is frequently necessary to change the application, and sometimes to resort to emollients and sedatives for some time.

According to my experience, internal treatment often aids materially in effecting as well as in perpetuating the cure, especially in patients of strumous diathesis, in whom the disease occurs by far the most frequently. Mercurial alteratives and laxatives in such cases may be used, when any derangement of the digestive organs exists, followed by tonics, and aided by generous diet, exercise in the open air, warm salt water bathing, &c. In many cases the iodide of iron will prove of decided service. Whatever course is pursued, patience and perseverance must form leading points in it.—H. D. B.

we must bear in mind that no one remedy is always successful, and that great perseverance is indispensable on the part of both physician and patient. Cleanliness must always be strictly attended to. [We have lately seen creasote succeed when many other means had failed. The diseased parts are to be touched with a camel's-hair pencil dipped in creasote, and dressings of an ointment composed of a scruple of creasote to an ounce of lard should afterwards be applied.—B.]

PORRIGO SCUTULATA.

SYN.—*Tinea annularis;* Ringworm.

This is a chronic contagious disease of the scalp, characterized by favous pustules arranged in annular-shaped clusters, the centre of which is not so crowded with pustules as the circumference. These are succeeded by scabs which are thin and small at first, but subsequently becoming thick and raised, and running into each other, form incrustations of considerable extent. The special seat of this disease is the scalp, but it frequently exists at the same time on the forehead and neck. When it appears on any other parts of the body, which seldom happens, it is the result of direct contact.*

Symptoms.—Porrigo scutulata commences with red, circular, and furfuraceous patches, upon which, after a variable period of time, sometimes several weeks, very small yellow pustules are seen, which are both less elevated and less imbedded in the skin than those of porrigo favosa. These pustules are more numerous towards the circumference of the spot than at its centre. The evolution both of the red patches and of the pustules is accompanied with smart, intense itching. The pustules very closely resemble those of porrigo favosa, but the yellow color is not so bright. They are commonly traversed by a hair, and have the same cupped appearance as the pustules of that variety. The contained fluid soon dries up, and forms scabs, which are thin at first, but increase in thickness, though they never become very thick; and when they fall off a large furfuraceous patch, with an uneven surface, is left, on which new favous pustules do not appear for a long time.

* In the last edition of their work, our authors substitute for the latter part of this paragraph the following description of *porrigo scutulata*:—"it is developed on the hairy scalp, which is its special seat, in the form of isolated, distinct, and circular patches; sometimes there is but one patch." Other alterations in this chapter are also made, which are embodied in the text.—H. D. B.

The hair falls off from these patches from the commencement, but is not completely destroyed. There is not, as in favus, permanent baldness.

When these circular patches are numerous, either from their spontaneous development, or from their inoculation of different parts by the patients scratching, they may extend and run together. The union of the patches then presents a peculiar aspect, a kind of furfuraceous covering, over which are scattered small points with favous pustules, and the circumference is distinctly made up of quarters and halves of circles.

Causes.—This disease often appears spontaneously in children, and persons of a lymphatic habit, and who are badly clothed and fed; but the most frequent cause is contagion. The use of the same comb, towel, cap, &c, frequently spreads the disease amongst children in schools, when the strong and vigorous are affected as well as the weak and delicate. It is occasionally seen in adults.

Diagnosis.—The diagnosis of porrigo scutulata is occasionally attended with some difficulty; however, *porrigo favosa* is the disease with which it is most likely to be confounded. It is distinguished from all other eruptions by the nature of the pustules, the color and form of the scabs, the baldness which it produces, and by its contagious character. The elementary lesions of both varieties of porrigo are small, yellow, umbilicated, and deeply-seated pustules; but in P. scutulata they are agglomerated and disposed in the form of rings; whilst in P. favosa they remain distinct, and do not retain any regular shape or form; besides, even when the incrustation of the latter spreads like the former over the scalp, they do not show the peculiar honeycomb appearance of porrigo favosa.

Impetigo figurata has been mistaken for this disease when situated on the hairy scalp; and on the other hand, P. scutulata, when developed on the limbs, has been confounded with I. *figurata.* The pustules of the latter, however, are superficial, slightly prominent, and rest on an inflamed base, whilst those of the former are deep-seated, imbedded, as it were, in the epidermis, and unattended with inflammation around their base; and the fluid they contain is concreted almost as soon as it is formed. The fluid of the impetiginous pustules slowly thickens, and is not converted into a true scab for some days. Moreover, the incrustations of impetigo are much thicker, and after disappearing are reformed by the sero-purulent exudation, whilst fresh pustules are necessary to produce new crusts in P. scutulata. The impetiginous patches are generally con-

fined within certain limits, and are distinct, and the incrustations are thicker in the centre than at the circumference. The latter disease never produces baldness, and is not contagious. These characters are sufficient to distinguish two diseases, a correct diagnosis of which is of the highest importance.

Porrigo scutulata may always be distinguished from *herpes circinatus*, and the patches of lepra which appear on the scalp, by observing the progress of these affections, and the manner in which they are developed.

Great confusion still exists in the diagnosis between porrigo scutulata and an eruption of the scalp (*ringworm*), which we have regarded as belonging to herpes *circinatus*, and have called *herpes tonsurans*. The English have not restricted the term *porrigo* to the true favous pustular eruptions to any great extent, partly because they were in the habit of applying this term to every kind of eruption of the scalp, and partly because porrigo favosa (*p. lupinosa*. Willan) is of rare occurrence in that country; besides, that *porrigo scutulata* presents itself under such forms there that we doubt whether the disease known among us under that name is really the porrigo scutulata of Willan and Bateman. Some English writers describe the contagious ringworm, or porrigo scutulata, as a furfuraceous disease, circular in its form, while others describe it as a pustular affection. Plumbe says that porrigo scutulata is first furfuraceous and then pustular; and his description evidently applies to the porrigo scutulata of France, patches of which we have seen remain for a long time in a furfuraceous state, and then have favous pustules on different points of their surface. But there is another contagious form of the disease of the scalp, circular in its form, without *favi*, and without pustules of any kind, which was, until very recently, unknown among us, to which one of us gave the name of *herpes tonsurans*, in consequence of its well established vesicular character at the commencement, and the simultaneous appearance of several spots of *herpes circinatus* in the neighborhood, on the neck, and on the forehead.

This confusion has arisen from the vague manner in which the term *porrigo* is used in England, and from the continued improper application of it in that country to *ringworm*, which is not a pustular affection.

In our opinion, the porrigo scutulata of English authors generally, contagious ringworm, is not only not our porrigo scutulata, but it is not a porrigo at all, but an eruption of a furfuraceous character. Further observation will decide whether it is a

pityriasis, or a form of herpes; but it is certain that it is not a pustular disease.

Prognosis.—Although this variety is not so difficult to be managed as P. favosa, still it often resists every mode of treatment. Baldness is not as frequent an occurrence as in the former variety; nor are the bulbs of the hair so much diseased.

Treatment.—The treatment which this affection requires is exactly the same as that already described under the head of porrigo favosa, to which we refer the reader.*

* No allusion has been made by our authors in either of the editions of their manual to the form of disease of the scalp known by English writers under the name of "*ringworm of the scalp*," until the brief notice in the edition of 1847, which we have embodied in the text of the present translation; and what is there said will do but little towards removing the confusion which exists in the minds of practitioners, and, to a certain extent, in the works of authors on the subject. One reason for this is probably its former rare occurrence in France, while porrigo favosa, the true favus, is of very frequent occurrence in that country, directly the reverse with respect to these two forms of disease of the scalp being true in Great Britain. The disease to which we refer is the *porrigo scutulata* of some writers, the *P. furfurans* of others, the *trichosis furfuracea* of Wilson, the *herpes tondante* of Mahon, who seems to have been the first French writer to notice it. As our authors say, it is not a *porrigo* at all; that is, it differs entirely in its elementary form, as well as in its progress, from the eruptions characterized by the yellow, cup-shaped, &c., pustules, known under the name of *favi*, a form to which the term porrigo should be restricted.

The disease to which we allude is characterized by furfuraceous patches, varying in size from a quarter or a third of an inch to an inch or more in diameter, usually nearly or quite circular in shape, attended with very little morbid sensation, perhaps a slight degree of itching, in which the hair breaks off at irregular though very short distances from the surface of the scalp, often giving the parts a moth-eaten appearance; and sometimes spreading by a succession of circles over greater or less portions of the scalp, which extend from their centres towards the circumference. The first thing observed is often a mere scurfiness of the skin, either around single hairs or in small patches around several hairs; which patches will often reach the size of one fourth or one third of an inch in diameter before being discovered, the hair immediately adjoining them being natural in color and unbroken. Small vesicular rings, like those of herpes circinatus, often appear on the neck and face at the same time, and sometimes on those parts in the nurses and mothers of the children.

It is a form of disease of the scalp quite common in this country, usually occurring between the ages of two or three and eight or ten years, and often causes no little embarrassment to practitioners. It is always cured, and never leaves permanent baldness; but often lasts for weeks and months, and even years.

Different views are entertained respecting its pathology, and also as to its contagiousness; some believing that it is caused by a vegetable growth within the body of the hair, while others regard it as a peculiar disease o[illegible]lf.

One of our authors, M. Cazenave, in his recent work o[illegible] scalp (*Traité des Mal. du Cuir Chevelu, Paris*, 1850), h[illegible] minute description of this form of disease, which he firs[illegible] large schools in Paris in 1840, and which is now quite[illegible] the name of *herpes tonsurant*. He regards it as [illegible] peculiar to the scalp, and describes it as character[illegible] each other in size, but exactly circular, dry, of[illegible] a peculiar kind of alopecia, in which the hai[illegible]

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* Dr Mahon takes a bit of mik. of [illegible] each individual pustule [illegible] on when it is over a more extensive [illegible] of white hellebore - ach last is [illegible]

GLANDERS AND FARCY.*

SYN.—*Equinia.*

[As glanders and farcy are fundamentally the same disease, resulting from a common cause, and differing from each other

the skin as to appear, at first sight, as if the spot were entirely bare." He says that in their very commencement the spots are red, and covered with very fine vesicles, which are very ephemeral, and always terminate by resolution.

Mr. Erasmus Wilson also describes the disease particularly, under the name of *trichosis furfuracea* (*Diseases of the Skin, Phila. edit.*, 1847), and we may also refer to a clinical lecture published in the New York "Annalist," Aug. 15, 1848, for a further account of it.

According to Mr. Wilson, it is necessary to use both internal remedies for the improvement of the general health, and local applications of a moderately stimulating nature to excite a new action in the affected part.

A favorite and often successful application at the commencement is the strong acetic acid, with which the parts are touched by means of a quill or brush, for several successive days. A solution of sulphate of copper rubbed over the patches three times daily, of a strength proportional to the sensibility of the parts affected, is also often useful; the friction to be continued until considerable smarting is felt. The average strength required is about 15 grs. to ʒ j. water. Stimulating and alterative ointments of different kinds may be used in different cases, alternated with alkaline lotions.

Mr. Wilson regards keeping the scalp constantly moistened with some oleaginous matter an important adjuvant to the cure. A remedy frequently used by him is liquor ammoniæ and olive oil, graduating the quantity of alkali according to the amount of stimulation which he wishes to produce. After the tenderness has abated which follows the use of acetic acid, he recommends the daily application of the citrine ointment, more or less diluted, or of an ointment of sulphate of zinc, ʒ j. to ʒ j. lard.

Irritating applications will frequently give rise to an eruption of vesicles or pustules over the patches, an accident which it is important to avoid, and upon the occurrence of which emollient or sedative applications must be made, the rule being always to avoid the use of any means which will inflame the scalp, or give rise to any discharge from the surface. Time, patience, and perseverance are important requisites on the part of all interested.

M. Cazenave insists (op. cit.) upon the rejection of all kinds of irritating applications. The topical means which he has found the most successful have been an ointment composed of two parts of citrine ointment and one part of tar; and more especially an ointment containing tannin, in the proportion of 15 to 30 grains to ʒ j. of lard. More recently, he has also used with advantage an ointment of sulphuret of lime, in the proportion of ʒ j. or ʒ ij. to ʒ j. of lard.

The constitutional means must be such as the condition of the patient at the time may indicate; alteratives, laxatives, and tonics, if required. Warm baths will often prove valuable adjuvants. Especial care must also be taken to prevent the spread of the disease by contact with others. H. D. B.

* Our authors, in the edition of their work in 1847, have themselves introduced an article on equinia, describing the disease under the two forms of E. *mitis* and E. *glanduloso*, the former being the vesiculo-pustular disease found about the heels of horses, and long since recognised as one of the sources of vaccine virus; and the latter, the peculiar affection known within but a comparatively few years, and which has its seat within the nasal fosse of that animal, and which is familiarly known under the name of *glanders*. We have not thought it proper, however, to substitute a translation of this for the original article furnished by Dr. Bur-

only by situation, I propose to describe and classify them with the pustular diseases to which glanders decidedly belongs. The tubercular nature of the eruption in farcy, would apparently indicate the propriety of placing that variety amongst the tubercular diseases; but it would involve a pathological contradiction to describe two affections so intimately allied as glanders and farcy are, apart, and in distinct classes of cutaneous eruptions.

GLANDERS AND FARCY IN THE LOWER ANIMALS.—These diseases have been observed in the quadrumana, to which class of animals they were formerly supposed to belong exclusively, in many different parts of the world. They have been found to exist in France, in Italy, Germany, England, Syria, Egypt, Asia Minor, Arabia, and in America. They were known to the ancients; but we possess few documents—and even those are scanty and imperfect—of their progress and development; and we are wholly ignorant of the place whence they derive their origin. It is marvellous the discrepancy of opinion that obtains amongst veterinary writers on this subject; and, instead of throwing any light on the question, they seem to involve it more than ever in a chaos of vague and fanciful speculation. "We cannot avoid," says M. Hamont, director of the Veterinary School at Abon-Zabel in Egypt, "being astonished at the confusion which prevails in veterinary works on the origin and causes of glanders and farcy. These diseases having been accurately observed only in some parts of Europe, and in climates and under circumstances nearly analogous, their exact etiology cannot be established without all the conditions attached to their development in the different countries in which they exist having been carefully observed and studied."

My attention has been particularly directed to these diseases since Dr. Elliotson's memoir appeared. I have had frequent opportunities of observing glanders in the horse, and I am bound to say that M. Hamont's statement is founded on fact. We look in vain in veterinary works for unity or precision in the various accounts of the origin, causes, and elementary nature of glanders and farcy. The pathological conditions are either wholly overlooked, or else imperfectly described, in the anxiety to announce some nostrum for a disease which is hitherto incurable, and must continue so until

gess in the work from which the first American edition was reprinted. Both have drawn freely from the labors of Dr. Elliotson in England, and Dr. Rayer in France; and Dr. B. himself, as well as our own authors, writes from personal observation of the disease. We therefore allow his chapter on this subject to remain untouched. H. D. B.

a more precise mode of observation be adopted. The result of M. Hamont's researches (which have recently been laid before the Academy of Medicine, in the form of a memoir) leads him to believe that glanders is a disease of *privation* or poverty (*misère*), and only attacks impoverished animals, whose constitutions are broken down by over-work and bad feeding, or those of a deteriorated breed; and that the blood-horse in Egypt scarcely ever falls a victim to the disease, whilst it is very common amongst the horses of the poor in that country. He denies the accuracy of the commonly received opinion, namely, that moisture and cold, narrow and ill-ventilated stables, are the causes of glanders and farcy, and states that he frequently observed them to be developed spontaneously in dry, large, and airy stables. M. Hamont considers tubercular lepra of man to be identical with the farcy of the horse, and that the former disease is confined to the poorer classes of society, and never attacks the rich and well-fed, exactly as the latter is developed in an ill-fed and low breed of horses.

"Tubercular lepra," says M. H., "appears in man on the arms, the body, and the nose; ulcers sometimes form within the nose, and secrete a disgusting sanious matter; and in this condition it has a striking resemblance to glanders in the horse."

Glanders may appear in the horse in different forms. It may exist in a simple form or combined with farcy. Either of these varieties may appear and run through their course separately, or, as commonly happens, one appears first, and after a certain period the other is superinduced. For example, the disease may begin with farcy buds and terminate in glanders, and *vice versâ*. Finally, they may assume an acute or chronic character.

The following are a few of the principal symptoms of glanders in the horse:—Intense inflammation of the pituitary membrane attended by erosions, which soon pass into chancre-like sores; swelling of the lips and nose; rapid extension of the ulceration giving rise to a purulent discharge, which often passes into a purplish or bloody and horribly fœtid sanies; subsequently, gangrene of the membrane of the nose, with increased discharge, sometimes with slight hæmorrhage; swelling and pain of the sublingual glands; inflammation of the conjunctivæ and eyelids, quickly passing into a livid and swollen state, with an offensive sanious discharge, and fever of a putrid or malignant character; respiration becomes laborious and hurried, and the superficial blood-vessels con-

gested, the animal dying in a few days, or after a longer or shorter interval.

When farcy supervenes during the progress of the disease, it is then called *farcy glanders*, and commonly presents the following additional appearances:—Small glandular tumors about the legs, lips, face, neck, and other parts of the body; these tumors vary in size and in the rapidity of their progress to ulceration. They sometimes create little inconvenience, particularly in a chronic state; but at other times they are large, painful, numerous, and rapid in their course. They are at first hard; soon become soft, burst, and degenerate into foul ulcers, with abrupt edges, and of a pale, glossy appearance. Lines of communication are ordinarily observed between these tumors or ulcers, especially when seated on the inside of the limbs; these lines are inflamed or enlarged absorbents. Such are the principal features of glanders and farcy in the horse.

GLANDERS AND FARCY IN THE HUMAN SUBJECT.

History.—From the commencement of the present century it was known that wounds resulting from the posthumous examination of glandered horses were of a dangerous character. It was also known, that, in consequence of such wounds, several veterinary surgeons were attacked with malignant inflammation, pains in the joints, mortification, terminating in some instances fatally. But all these results were attributed merely to a septic poison, analogous to that produced by other putrid matters, and not to the specific action of a particular virus. However, about that period (1811) M. Lorin discovered and proved the transmission of *farcy* from horse to man. (*Observation sur la Communication du Farcin des Cheveaux aux Hommes. Jour. de Med. Vétérinaire*, Feb., 1812.)

Although this is the first case on record of the disease in man, it by no means follows that the human race was never afflicted with glanders before this time. On the contrary, we have good reason to suppose that mankind was afflicted formerly as well as now with both varieties of the complaint, but that it escaped the less scrutinizing observation of our forefathers. It was not till 1821, however, that the first detailed case of acute *glanders* in a man was published. It is recorded by Shilling, a veterinary surgeon at Berlin.—(*See Rust's Magazine für die Gesammte Heilkunde, vol* ix.) The subject of this case was a stable-boy at a veterinary college, who became unwell soon after washing the nostrils of a glandered horse. A pustular eruption broke out on the skin,

pimples appeared on the nose, which speedily became gangrenous; the boy died; and at the examination of the body after death, small purulent spots were found on the frontal bone, and pus in the muscles of the extremities. In another case, appended to that of Shilling, and which is related by Weisses, there were observed delirium, pustular eruption on the skin, and a secretion of yellow purulent matter from the nostrils. This patient had been taking care of a glandered horse, and died on the thirteenth day from the commencement of the attack. Soon after these cases were published in Germany, Mr. Muscroft recorded, in the nineteenth volume of the *Edinburgh Journal*, the case of a jockey who wounded himself in the hand while trimming a glandered horse, and died with all the symptoms of glanders. Here also the resemblance of the disease in the horse with that observed in man is strikingly exact. In 1822, Thomas Tarozzi, in Italy, translated the case of Shilling into the *Annali Universali*, and gave a description of a pestilential disease which was developed in a stable where a glandered horse died; out of thirty-five persons who visited that stable eleven were attacked with a malignant complaint, characterized, from its invasion to its termination, by fever and an eruption of boils and gangrenous pimples. At the close of 1823, two new cases of the disease in the human subject were published in the *Edinburgh Journal;* and another was published in the same year in Germany, by Seidler, in *Rust's Magazin*. In 1826, Mr. Travers threw some additional light on the history of glanders in man, in his work on "*Constitutional Irritation*." In 1829, Arnold Grub defended an inaugural dissertation at Berlin, in which he relates a remarkable case of the transmission of glanders from the horse to man. The same year another thesis on the same subject was defended by Kriseg. It was also in 1829 that Mr. Andrew Brown published a well-marked case of acute glanders in man, in the *London Medical Gazette*, vol. iv. p. 134.

However, notwithstanding their extreme importance, these facts were as yet little known, when Dr. Elliotson published a memoir entitled "*Glanders in the Human Subject*," in the sixteenth volume of the *Med. Chir. Transactions* for 1830, which at once attracted the attention of observers to this interesting and important question. This memoir contains three well-authenticated and convincing cases of the disease in man; and from its publication, *only twelve years since*, we date the commencement of our inquiries into the disease, in so far as the human being is concerned, for up to that period doubts were still entertained by many persons as to the iden-

tity of the two diseases. In the same year (1830) M. A. Nauman, Professor of Veterinary Medicine at Utrecht, also reported two interesting cases (*Wee-Artsenijkundig Magazin*; Groningen, 1830); in addition to which, M. Alexander, Professor at the same University, has added two new instances in the course of the year 1836.—(*De la Diathèse purulente, et de la Morve aigue communiquée à l'homme; Archives Générales, Dec.* 1836.) In 1833, Dr. Elliotson published another case of the disease, with a colored drawing. Mr. Youatt saw this case with Dr. E. It was the first case of the kind he had seen; and up to that period would not, according to the statements of Dr. Elliotson, admit the transmissibility of glanders from horse to man. He has since, however, announced his belief in that opinion. In 1834, M. Hertwig observed seven cases of farcy and glanders in the human subject; amongst these, three were evidently and distinctly those of well-marked simple glanders. It is also evident that certain cases observed and published by M. Brera, in 1833, and described by him under the name of *Typhus carbonneux* in the *Encyclographie Médic.*, belonged properly to the disease under consideration. M. Felix Vogely, of Lyons, in a memoir, entitled, "Some Facts tending to establish the Transmission of the Farcy of Horses to Man," has cited five examples.—(*Journ. de Med. Vétérinaire*, Jan. 1835.) From 1830 to 1837 a variety of papers have been published on this subject by MM. Hardwicke, Wolff, Prinz, Berndt, and Eck.

M. Rayer communicated to the members of the French Academy, February 14, 1837, the remarkable case of the man Prost, who died under his care, of acute glanders. This interesting communication immediately gave rise to an animated discussion in the Academy, in which MM. Rayer, Dupuy, and Velpeau, supported the opinion of the identity of the disease of the horse and of the human being; while they were opposed by MM. Bartlemy and Bouley. The latter opinion appeared to prevail at the time, but the publication of a very elaborate and very valuable memoir by M. Rayer, inserted in the Memoirs of the Academy for the same year, removed all further doubt on that question. In addition to the case (Prost's) published, M. Rayer gave a great number of observations, the results of his own researches into the nature of the disease. He confined his description of glanders and of farcy to the *acute* forms of these complaints. He gives a graphic description of the progress of the disease in the human subject. The inoculations, and their results, of man with the morbid virus taken from the horse, and the reverse, have been elaborately discussed. Indeed, the existence of

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History.—From the commencement of the present century it was known that wounds resulting from the posthumous examination of glandered horses were of a dangerous character. It was also known, that, in consequence of such wounds, several veterinary surgeons were attacked with malignant inflammation, pains in the joints, mortification, terminating in some instances fatally. But all these results were attributed merely to a septic poison, analogous to that produced by other putrid matters, and not to the specific action of a particular virus. However, about that period (1811) M. Lorin discovered and proved the transmission of *farcy* from horse to man. (*Observation sur la Communication du Farcin des Cheveaux aux Hommes. Jour. de Med. Vétérinaire*, Feb., 1812.)

Although this is the first case on record of the disease in man, it by no means follows that the human race was never afflicted with glanders before this time. On the contrary, we have good reason to suppose that mankind was afflicted formerly as well as now with both varieties of the complaint, but that it escaped the less scrutinizing observation of our forefathers. It was not till 1821, however, that the first detailed case of acute *glanders* in a man was published. It is recorded by Shilling, a veterinary surgeon at Berlin.—(*See Rust's Magazine für die Gesammte Heilkunde, vol* ix.) The subject of this case was a stable-boy at a veterinary college, who became unwell soon after washing the nostrils of a glandered horse. A pustular eruption broke out on the skin,

pimples appeared on the nose, which speedily became gangrenous; the boy died; and at the examination of the body after death, small purulent spots were found on the frontal bone, and pus in the muscles of the extremities. In another case, appended to that of Shilling, and which is related by Weisses, there were observed delirium, pustular eruption on the skin, and a secretion of yellow purulent matter from the nostrils. This patient had been taking care of a glandered horse, and died on the thirteenth day from the commencement of the attack. Soon after these cases were published in Germany, Mr. Muscroft recorded, in the nineteenth volume of the *Edinburgh Journal*, the case of a jockey who wounded himself in the hand while trimming a glandered horse, and died with all the symptoms of glanders. Here also the resemblance of the disease in the horse with that observed in man is strikingly exact. In 1822, Thomas Tarozzi, in Italy, translated the case of Shilling into the *Annali Universali*, and gave a description of a pestilential disease which was developed in a stable where a glandered horse died; out of thirty-five persons who visited that stable eleven were attacked with a malignant complaint, characterized, from its invasion to its termination, by fever and an eruption of boils and gangrenous pimples. At the close of 1823, two new cases of the disease in the human subject were published in the *Edinburgh Journal;* and another was published in the same year in Germany, by Seidler, in *Rust's Magazin.* In 1826, Mr. Travers threw some additional light on the history of glanders in man, in his work on "*Constitutional Irritation.*" In 1829, Arnold Grub defended an inaugural dissertation at Berlin, in which he relates a remarkable case of the transmission of glanders from the horse to man. The same year another thesis on the same subject was defended by Kriseg. It was also in 1829 that Mr. Andrew Brown published a well-marked case of acute glanders in man, in the *London Medical Gazette*, vol. iv. p. 134.

However, notwithstanding their extreme importance, these facts were as yet little known, when Dr. Elliotson published a memoir entitled "*Glanders in the Human Subject,*" in the sixteenth volume of the *Med. Chir. Transactions* for 1830, which at once attracted the attention of observers to this interesting and important question. This memoir contains three well-authenticated and convincing cases of the disease in man; and from its publication, *only twelve years since*, we date the commencement of our inquiries into the disease, in so far as the human being is concerned, for up to that period doubts were still entertained by many persons as to the iden-

tity of the two diseases. In the same year (1830) M. A. Nauman, Professor of Veterinary Medicine at Utrecht, also reported two interesting cases (*Wee-Artsenijkundig Magazin*; Groningen, 1830); in addition to which, M. Alexander, Professor at the same University, has added two new instances in the course of the year 1836.—(*De la Diathèse purulente, et de la Morve aigue communiquée à l'homme; Archives Générales, Dec.* 1836.) In 1833, Dr. Elliotson published another case of the disease, with a colored drawing. Mr. Youatt saw this case with Dr. E. It was the first case of the kind he had seen; and up to that period would not, according to the statements of Dr. Elliotson, admit the transmissibility of glanders from horse to man. He has since, however, announced his belief in that opinion. In 1834, M. Hertwig observed seven cases of farcy and glanders in the human subject; amongst these, three were evidently and distinctly those of well-marked simple glanders. It is also evident that certain cases observed and published by M. Brera, in 1833, and described by him under the name of *Typhus carbonneux* in the *Encyclographie Médic.*, belonged properly to the disease under consideration. M. Felix Vogely, of Lyons, in a memoir, entitled, "Some Facts tending to establish the Transmission of the Farcy of Horses to Man," has cited five examples.—(*Journ. de Med. Vétérinaire*, Jan. 1835.) From 1830 to 1837 a variety of papers have been published on this subject by MM. Hardwicke, Wolff, Prinz, Berndt, and Eck.

M. Rayer communicated to the members of the French Academy, February 14, 1837, the remarkable case of the man Prost, who died under his care, of acute glanders. This interesting communication immediately gave rise to an animated discussion in the Academy, in which MM. Rayer, Dupuy, and Velpeau, supported the opinion of the identity of the disease of the horse and of the human being; while they were opposed by MM. Bartlemy and Bouley. The latter opinion appeared to prevail at the time, but the publication of a very elaborate and very valuable memoir by M. Rayer, inserted in the Memoirs of the Academy for the same year, removed all further doubt on that question. In addition to the case (Prost's) published, M. Rayer gave a great number of observations, the results of his own researches into the nature of the disease. He confined his description of glanders and of farcy to the *acute* forms of these complaints. He gives a graphic description of the progress of the disease in the human subject. The inoculations, and their results, of man with the morbid virus taken from the horse, and the reverse, have been elaborately discussed. Indeed, the existence of

glanders in the human being could be no longer doubtful even to the most incredulous, after perusing the important and interesting memoir of M. Rayer. During the year 1838, MM. Brugières and Vigla recorded a case of the same malady, which occurred under M. Breschet, at the Hotel Dieu, Paris: and about the same period M. Deville on the one hand, and MM. Husson and Nivet on the other, published additional facts, which immediately produced a new discussion in the Academy as to the possibility of the transmission of glanders from man to the horse, and *vice versâ*. M. Bartlemy, who again took an active part in the debate, seemed wedded to his former opinion, in which no other member now coincided. New cases were published soon after by MM. Nonat, Legroux, Andral, Lions, Petit, and Renaud; and M. Vigla, in an interesting thesis (January, 1839), has taken up with much talent, and confirmed by observations of his own, several interesting points in the history of this dire disease.

Mr. Leblanc, of Alfort, has demonstrated, in two important memoirs of this subject—the first entitled "On the different Kinds of Glanders and Farcy considered as Varieties of one and the same general Affection;" and the other, "Experimental Researches on the Effects of the Inoculation of the Horse and Ass with glandered pus and mucus, and with morbid humors of a different nature;" Paris, 1839—First, that all forms of glanders and farcy are contagious, but differ in intensity according to the constitution of the animal and other obvious circumstances; and secondly, that pus or mucus taken from glandered men or horses, no matter from which, will produce glanders or farcy in healthy animals of a similar kind if inoculated with them, whilst pus or other matter not taken from glandered or farcied animals will not produce either glanders or farcy.

In the *London Medical Gazette* for April, 1840, there is an account of a knacker who died at St. Bartholomew's Hospital of glanders, and the *nurse who attended him took the disease, and died also*—this is the first instance on record of glanders being transmitted from one human being to another; and M. Gibert of Paris, relates a case, in the *Révue Médicale* for November, 1840, of a man named Pagout, who died of acute glanders after having suffered dreadfully for some days.

Several cases of glanders have been published in the English journals since that date, proving the identity, if any proof were wanting, of glanders in the horse and in man.

Symptoms.—The symptoms of acute glanders in man are essentially typhoid. The disease usually commences with

general constitutional disturbance; headache, depression of spirits, prostration of strength, stiffness and constant pain of the joints, aggravated by motion, irritability of the stomach, and excessive thirst. The patient complains of great heat about the nose and windpipe, accompanied with a copious viscid discharge, and with pain in the head, back, and limbs, and constriction about the chest. After a certain period, the nose and surrounding parts become swollen, hot, excoriated, and of a bright red or livid color: one or both eyes are inflamed, or completely closed; a profuse tenacious mucus, at first of a deep yellow, but afterwards of a bloody or dark sanious appearance, exudes from the nostrils, and occasionally from the eyes; hard, round, phlyzacious pustules appear on different parts of the body; the temperature of the skin is increased; the pulse is rapid, soft, and weak or undulating; respiration quick, weak, and shallow. The tongue dry, rough, and reddish brown; the body is bathed in copious and offensive perspiration, the thirst unquenchable, the stools are slimy, and horribly fœtid; the voice is weak, and the mind wandering. In the course of a few days these symptoms become still more aggravated; diffused abscesses appear in various parts of the body, especially about the joints. The fever assumes a more malignant character; the disease extends to the air-passages and lungs; fresh abscesses form and suppurate; the nose and surrounding parts become gangrenous; the perspiration is more profuse and sour; finally, a state of general collapse ensues, and death is ushered in by a low muttering delirium; the fœtor from the discharges, and from the whole body, towards the close of the disease, is insupportable.

When the disease is complicated with farcy, constituting the variety called *farcy glanders*, we may observe the following additional symptoms:—Small tumors on different parts of the body, but more numerous on one side than on the other, having a glossy red appearance, which soon changes to a dark brown. They also affect the head, or even the face, and chiefly on one side; they are sometimes exceedingly painful, they crack on the surface, and a thin acrid sanies exudes. They vary in size, and are generally accompanied with pustules in different parts of the body; the fauces are injected with blood, and of a purplish hue. The inflammation of the lymphatic vessels and ganglions is generally accompanied with diffuse inflammation of the subcutaneous cellular tissue. If the disease be inoculated, as it commonly is, a true pustule sometimes forms in the vicinity of the puncture, to which succeeds an ill-conditioned ulcer, with raised edges and of a

greyish aspect. An inflamed red line, or cord, produced by the swollen and inflamed lymphatics, is then observed along the limb, and the lymphatic glands of other parts of the body become sympathetically affected. Simple farcy may thus slowly, but steadily, proceed to the destruction of life, or acute glanders may supervene and hasten that event.*

Morbid Appearances.—Abscesses are generally found in the lungs, which are engorged with dark blood; the bronchi are congested, livid, and partially filled with a dark frothy mucus; the nostrils and frontal sinuses contain a brownish glutinous matter, and the lining membrane is ulcerated and studded with small tubercles, which are generally ulcerated. The mucous membranes of the stomach and bowels are softened, discolored, and sometimes studded with tubercular indurations, similar to those on the nose. When glanders is complicated with acute farcy, the following additional appearances may be seen: An eruption of pustules and bullæ, in various stages of development on different parts of the body, especially on the face, limbs, trunk, and genitals. The eruption sometimes resembles varicella and ecthyma, and, when the bullæ are large, rupia and the yaws.

The pustules, according to M. Rayer, do not contain true pus until a late period of their progress, and then but in small quantity. In the nascent state they resemble firm reddish papulæ, in which condition they neither contain pus nor fibrinous deposit. At a later period they contain a plastic matter, which does not flow like pus. When examined by the microscope, this matter does not present pus globules; but blood globules are seen in a state of morbid alteration, some of which preserve their peculiar form and yellowish color. Under this plastic deposit the cutis presents small red spots, and is depressed and excoriated, but the deposit itself is neither circular nor depressed in the centre like the disc of variola; neither are the pustules umbilicated like those of small-pox. The farcinous pustules, when more advanced, penetrate into the substance of the cutis vera, the tissue of which is partly destroyed. Abscesses are invariably found in the subcutaneous and intermuscular cellular tissues in the human subject, in various parts of the body; they are not so fre-

* Dr. Elliotson describes four different forms of glanders as appearing in the human subject:—1st. That of *simple* acute glanders; the disease attacking the nasal cavities and adjoining parts. 2d. That of *acute farcy glanders*; appearing in different parts in the form of small tumors, followed by foul ulcers, suppuration, &c. 3d. These varieties may exist separately, or may be both produced at the same time, or the one may precede the other. 4th. Each of these may also occur in a *chronic* form, and in this form, also, may exist separately or be conjoined.—(Copland—*Dict. Prac. Med., art. Glanders.*) H. D. B.

quently met with in the quadrumana. The veins are more or less inflamed. Depositions of purulent matter are found in the lungs, the tissue of which is considerably softened, and there is an effusion of a sero-sanguineous fluid in the pleura and pericardium. M. Rayer mentions a case in which a small abscess was found in the brain, and an effusion of sanguineous serum in the arachnoid.

Causes.—Glanders and farcy originate in the quadrumana. (?) They are never developed spontaneously in the human subject, and when they do occur in man, they have been transmitted to him from the lower animals; but they may be propagated from one human being to another. It is to be regretted that the etiology of these affections in the quadrumana is still involved in so much obscurity, for it is clear that our knowledge of their nature, so far as the human being is concerned, must be of little avail, whilst their remote causes in the animals in which they originate are matters of mere conjecture.

Glanders and farcy are essentially contagious diseases, whether developed in man or in the quadrumana. They are, moreover, decidedly *infectious* as well as contagious in the latter class of animals, i. e. the contagious principle may be transmitted through the medium of the atmosphere, as well as by actual contact from one animal to another. I have known several instances in which there was no possibility of contact with glanderous matter, and yet the disease was developed in healthy horses. A gentleman of fortune, in the west of Ireland, had had his stud of horses infected with glanders. Every particle of woodwork in the stables, including stalls, rack, manger, &c., was taken down or replaced with new materials. The plastering on the walls was completely removed, and the pavement ripped up, and all was replaced with entirely new work; but the first horses that were again put into those stables became *infected*, and they were ultimately razed to the ground. It would even appear that the contagious principle remains for a lengthened period, sometimes for years, in any stable or shed where glanders or farcy may happen to have been developed.

Although it is by no means proved that these affections may be transmitted to the human being through the medium of the atmosphere, still their history shows that the effluvia of glandered bodies is capable of exciting a malignant disease, if not real glanders, in man, when exposed to its influence. The cases related by Terozzi, for example, support this view. Dr. C. Williams also relates a case, in which a girl, sleeping over a stable where a glandered horse was kept, became affected

with a disease very analogous to glanders, although she did not come in contact with glanderous matter. There is another case in the *Bull. de l'Acad. de Médécine*, November, 1841, in which it is stated that a dresser at the Hospital Necker, who had the care of a glanderous patient, contracted the disease, not by inoculation, but the same way that small-pox or scarlatina is contracted; in other words, by infection. However, as the dresser assisted at the autopsy of his patient before the disease was manifested in himself, this case is open to objection. A similar case is related in the Medical Gazette, as already mentioned, in which the nurse took the disease from the patient she was attending, and died of it. If these examples prove nothing else, they show at all events that glanders may be communicated from one human being to another. M. Hamont's researches go to prove that the old notion of glanders being always the result of damp, narrow, and ill-ventilated stables, is erroneous. He maintains, 1. That the original causes of glanders and farcy do not exist in stables. 2. That the habitation exerts but a very secondary influence towards their development. 3. That an insufficiency, or a bad quality of food, may excite both glanders and farcy in degenerated animals; and lastly, that they never appear spontaneously in the blood-horse when well fed and taken care of.

The matter of a glandered sore will produce *farcy*, and that of a farcy-bud will produce *glanders*, a convincing proof of the identity of these diseases.

Diagnosis.—Farcy may be mistaken at the commencement of its progress for the diffused inflammation consequent upon *dissection wounds*. They are both characterized by inflammation of the lymphatics and absorbents, by purulent deposits in similar tissues, and are ushered in and accompanied by the same train of typhoid symptoms. The *cause* alone distinguishes these two series of pathological phenomena. Farcied or glandered matter, or an atmosphere contaminated with their effluvia, are necessary to engender farcy; but the matter of a fresh and healthy subject is as likely—some think more so—to produce dissecting wound inflammation as that of one in a state of decomposition. A *fresh* human brain is more dangerous to examine than a subject dead of cholera. At a later period, when the eruption is fully developed, and when gangrenous bullæ and diffused abscesses are mixed with the pustules, the diagnosis will not be so difficult. Besides, the peculiar characters of the pustules, and the nature of the contained fluid already indicated, together with the history of the complaint, will at once distinguish farcy from all other diseases

arising from the introduction of other morbid or putrid matter into the system. The same characteristic phenomena will distinguish it from phlebitis, and from the different pustular, bullous, or even tubercular eruptions, which it may resemble in its various phases.

Prognosis.—The prognosis of the acute varieties of glanders is highly unfavorable. In the chronic state, life may be prolonged for a certain period, but in such a condition that death would be preferable to it. In the horse, however, this form is not so unfavorable, for the animal may still continue to work, with farcy buds of considerable size along the legs, without the health being seriously injured, and the tumors may ultimately disappear. Although cases of "cure" have been recorded, I doubt very much if they were cases of real glanders, for, as far as our present knowledge goes, glanders still appears to be an incurable disease.

Treatment.—The treatment of glanders, like the remote causes of that disease, is vague and uncertain, and as yet no remedies have been discovered that can prevail against it.* The prophylactic measures are, however, more evident. As we know that the disease, when once generated, may be transmitted by inoculation, every precaution should be taken to obviate that event. For example, persons going about or handling glandered animals, whether brute or human, should frequently wash their hands, and perhaps their faces as well, in a strong solution of alum; the slightest cut or scratch on any part of the skin that is exposed should be covered and protected, and the attendants should wear long gloves.

Various antiseptic, stimulating, and tonic remedies have been recommended during the progress of the disease, with the view of arresting it, and at the same time supporting the patient's strength when typhoid symptoms supervene. These are pyroligneous acid, creasote, camphor, chlorate of potash, warm turpentine, the sulphates of copper and iron, quinine, &c., but their administration has been attended with little benefit. However, Dr. Elliotson relates a case in which chronic glanders in the human subject was cured in a few weeks, by the constant injection of a solution of creasote up the nostrils. The abscesses should be opened by free incisions. The inflamed lymphatic glands have been extirpated in some cases of chronic farcy.

Fumigations with the vapor of a combination of sulphur and iodine, as recommended in lepra, will be found useful in

* Dr. Lee states (*Cycl. Prac. Med., Amer. ed., art. Glanders, note*) that several cases have recovered under the use of creasote and turpentine. H. D. B.

allaying the pain of the ulcerated tumors, and in altering the vitality of the inflamed and enlarged glands before they suppurate, especially when situated on the lower extremities. Local bleedings, emollient poultices, and subsequently alkaline poultices, have been prescribed with a similar view, but have not been attended with much success. In case of inoculation in the thigh, or in any part of the body where a cupping-glass may be applied, it should be instantly employed, and the wound should be deeply cauterized immediately afterwards. B.]*

* For further details, see Cycl. Prac. Med., Amer. ed., art. Glanders, by Dr. Dunglison, and Copland's Dict. Prac. Med., Amer. ed., by Dr. Lee, who has added numerous references to different works on the subject. H. D. B.

PAPULÆ.

The diseases belonging to this order are characterized by small, firm, and solid elevations of the skin, called *papulæ*. They are slightly prominent, never contain either pus or serum, and are always attended with more or less and sometimes very severe itching. Sometimes they are merely the result of a morbid enlargement of the cutaneous papillæ; and sometimes elevations of the skin itself.

These diseases generally assume a chronic form, and their duration varies from a week or two to several months, and even years, as in prurigo, for example. There is no region of the body on which they are not occasionally developed. They are sometimes confined to a single region, but most frequently they affect localities very remote from each other at the same time. When the eruption appears on the limbs, it is usually on the outer aspect, and in the line of extension. When it affects the trunk, it generally appears on the back.

Symptoms.—The papular diseases are always preceded by pretty severe itching, and are slowly developed. A number of small, slightly prominent points first appear, usually of the color of the skin, but often of a red or whitish tint. They gradually enlarge, and on passing the fingers along the skin, small, round, hard, prominent elevations are distinctly felt. They are generally distinct, and are much smaller in *lichen* than in *prurigo*. These affections are rarely accompanied by febrile symptoms. They terminate in resolution, more frequently in slight desquamation, and occasionally in a slight degree of ulceration, which supervenes at the summit of each papule, changing the aspect and condition of the disease; hence the name *lichen agrius*. A reddish-yellow discoloration of the skin of the affected parts generally remains for a long period, even for years after the disappearance of the eruption.

Causes.—These affections are not contagious, and are usually developed without any appreciable cause. Sometimes they are evidently produced by poverty and want of cleanliness, as often is the case in prurigo.

Diagnosis.—The diagnosis of the papular affections is not

in general difficult. They may sometimes resemble certain forms of *scabies* and *eczema*, but, with the slightest attention, the elementary character of the eruption will readily be detected.

Prognosis.—The prognosis is not unfavorable, except that the disease may be prolonged for a considerable time, and alter the vitality of the skin; and the insupportable itching with which it is accompanied may produce evil results, as in prurigo of the pubes, for example.

Treatment.—Sometimes the papular diseases yield to the simplest remedies; they are, however, most frequently obstinate and rebellious, even under the most energetic treatment. There are two genera in this order, *lichen* and *prurigo*.

LICHEN.

SYN.—*Papulæ; Papulæ siccæ; Scabies sicca; Scabies agria; Dartre furfuracée volante.*

The term lichen was regarded formerly as a synonym of impetigo, but Willan and Biett have applied it exclusively to a papular affection, characterized by minute, hard elevations, which are sometimes slightly red, but more frequently of the color of the skin; almost always agglomerated and accompanied with severe pruritus. It sometimes assumes an acute but more frequently a chronic character. All parts of the body may be affected; sometimes it is general, but more commonly confined to one or more regions—the hands, forearms, neck, and face, being its most frequent seats. It appears in two very different forms; *lichen simplex*, and *lichen agrius*.

Lichen simplex appears in the form of an eruption of very small agglomerated papulæ, rarely larger than a millet seed. When the disease assumes an acute form, they are red, inflamed, and accompanied with heat and distressing itching. In about three or four days the redness diminishes, a slight furfuraceous desquamation is established, and the disease terminates before the second week, unless a fresh eruption takes place. The papulæ are neither red nor inflamed in the chronic form; on the contrary, they are generally the color of the skin. They are preceded by a slight itching, and are hard, prominent, and firm to the touch; imparting to the fingers a kind of prickly sensation. These papulæ remain stationary for an indefinite period; a new eruption may break out when the former declines, and thus prolong the disease even for some months. This variety is always accompanied by a considerable degree of thickening of the skin, and fre-

quently by a pretty severe exfoliation. Lichen simplex usually appears on the face and trunk in the acute form. In the chronic state, it commonly affects the limbs and dorsal aspect of the hands.

Symptoms.—Unless when it is diffused and very acute, this affection is never preceded or accompanied by febrile symptoms. Formication and itching are its only precursors. Various terms have been applied to the disease, according to certain differences in its seat, form, and aspect. 1. When the papulæ are developed at the roots of the hair, which is a very obstinate form, it is called *lichen pilaris*. 2. When it occurs on the limbs of old, debilitated subjects, the papulæ are not prominent, but are frequently mixed with spots of purpura hæmorrhagica, and the eruption assumes a violet tint—hence the name *lichen lividus*. 3. Sometimes the papulæ appear collected in regularly-formed circular groups with defined margins—*lichen circumscriptus*. These patches extend by the development of fresh papulæ round the margin, whilst the centres heal with slight exfoliation. They are rarely isolated, but are more or less numerous, and then run together at their borders. 4. M. Biett has described a very rare variety under the name of *lichen gyratus*. We have seen several cases of this kind at the Hospital of St Louis. The papulæ formed a sort of elongated band, extending from the anterior part of the chest to the inner surface of the arm, twisting on itself and following the course of the ulnar nerve, until it reached the little finger. Independently of these forms, which are merely modifications of lichen, there are two other much more important varieties of that disease, namely, *lichen urticatus*, and *lichen strophulus*.

Lichen urticatus.—In this variety the papulæ are numerous, and much larger than in any other form of the disease; they are inflamed, elevated, and confluent like the stings of nettles. They appear suddenly, and are attended with a painful, distressing pruritus. It most frequently attacks children, females, and persons of a fine delicate skin, in the spring and during the heat of summer. It usually attacks the face and neck, but may appear on the extremities. The eruption is irregular, transitory, and often reappears soon aften it has subsided. This affection terminates by resolution, or by slight furfuraceous desquamation.*

* This form of eruption is a common and very troublesome one in the spring and during the summer, and is characterized by large, inflamed, and elevated papulæ, which resemble very much the bites of bugs, and of some insects. The inflammation, however, subsides in a day or two, and leaves small, elevated papulæ, which itch very much, and when seen by the physician, are very frequently excoriated by the nails of the patient. The thighs are a frequent seat of it, as well as

Lichen strophulus, commonly called *red gum*, *white gum*, and *tooth rash*, generally attacks children at the breast. It always assumes an acute form; the papulæ are sometimes redder, sometimes paler than the surrounding skin, and are accompanied with severe itching, which is always aggravated by the heat of the bed, and is subject to severe exacerbations. This variety presents considerable diversity in its color and form, and these various appearances are often seen coexisting in the same infant. When the papulæ are *red* or inflamed, prominent and mixed with erythematous patches, the eruption is called *strophulus intertinctus*. When they are small, numerous, set close together, and confluent, they constitute the modification called *S. confertus:* again, when they are disposed in circular clusters, and diffused over different regions, the disease is called *S. volaticus*. MM. Guersent and Blache have recorded a remarkable case, in which the papulæ were much elevated, and seated in the centre of petechial spots. When the papulæ are *white*, small, limited in number, and surrounded with a slight inflammatory areola, the disease is designated *S. albidus;* when they are larger, more projecting, and without any inflammatory blush, it is called *S. candidus*. Lichen strophulus generally appears without any appreciable cause. It accompanies the process of dentition, and sometimes seems connected with internal disease. Its duration varies from one to three or four weeks. It is an ephemeral disease, and is never dangerous. The only treatment it requires are a few tepid baths for the infant, and some cooling and refreshing drinks for the nurse. The physician should always endeavor to ascertain if it is produced or kept up by an internal organic lesion.*

Lichen agrius may appear spontaneously, or it may succeed to *lichen simplex*. When it appears spontaneously, the papulæ are very small, red, acuminated, inflamed, and developed on an erythematous surface of limited extent, which is generally attended with heat and painful tension. Instead

the other parts mentioned above. The itching is sometimes so severe, even with a comparatively moderate amount of eruption, as to interrupt very much the sleep of the patient. H. D. B.

* Though perhaps never dangerous, strophulus in our climate, and especially during the spring and summer months, is often a source of much suffering. It is often connected with deranged secretions, and especially with acidity—requiring the use of small doses of some mercurial and alkaline laxatives, as rhubarb and soda, or rhubarb and magnesia. At the same time, particular attention must be paid to the diet of the mother or nurse, or to that of the child itself, if weaned. The gums must also be carefully watched, and lanced, if necessary. The tepid bath is often very grateful and serviceable. In some cases, small portions of sulphate of quinine are useful, and at other times, the mineral acids, with vegetable bitters, in doses proportioned to the age of the child. In children with very irritable skin, the use of flannel sometimes produces, and at other times keeps up the eruption. H. D. B.

of subsiding on the fourth or fifth day, they continue increasing; slight ulcerations form on their apices, whence issues a sero-purulent fluid, which concretes, and forms yellowish prominent crusts, soft and slightly adherent. These incrustations fall off, and are then replaced by thin, scaly scabs. Sometimes the redness diminishes, the inflammation disappears, slight desquamation ensues, and the disease terminates about the twelfth or fifteenth day. But frequently the discharge continues, and new crusts are formed, by which the disease is prolonged considerably. The itching which accompanies it is often so intense that the patient seeks the hardest substance to rub himself with, and this invariably aggravates the pruritus. It may continue in this manner for several weeks, or it may pass into the chronic state, when the scaly incrustations disappear, and are succeeded by slight exfoliation: and the skin is often considerably hypertrophied. This form may last for months.

Lichen simplex may, as already mentioned, pass into the state of lichen agrius, in which event it is accompanied with heat and smarting, instead of pruritus. The papulæ are confluent, and are surrounded with a small reddish areola; they soon become red themselves, and the eruption pursues the same course as idiopathic lichen agrius. But sometimes the inflammation is less severe and of shorter duration, and does not extend over the whole seat of the eruption; and in such cases, it may produce a favorable change in the disease. This variety often appears on the face; it is seldom general, and occurs most frequently in young persons, and in adults of strong and vigorous constitutions.*

Causes.—Lichen is not confined to any period of life, or to either sex. It is met with most frequently in spring and summer. It is frequently produced by extreme heat; the direct rays of the sun, for example, may develope the eruption on the face. It is very common in tropical countries, hence the name *Lichen tropicus.* It sometimes is produced by grief, and by the intemperate use of ardent spirits. There are certain local varieties depending on distinct local causes; as, for instance, the disease is frequently seen on the hands of grocers, and persons who are much in the habit of handling pulverulent substances. It occurs on the arms of cooks and

* In addition to these varieties, Rayer describes four others, deriving their characteristics from their seat, and which may be mentioned, because the disease is often confined to one or more of these parts:—1st. Lichen *of the face;* 2nd. L. *of the extremities;* 3d. L. *of the genital organs and of the margin of the anus;* 4th. L. *of the hairy scalp.* Chronic lichen *of the hands* is one of the forms of the eruption popularly known under the name of *salt rheum;* the other, comprising with this nearly all the cases thus called, being chronic *eczema* of those parts.
H. D. R.

blacksmiths, from exposure to heat, and is not unfrequently a consequence of gastric derangement, especially in infants.

Diagnosis.—The diagnosis of lichen is often very difficult. *Lichen simplex* may, in particular, be confounded with *eczema*, *scabies*, and *prurigo*. The solid, firm, cuticular elevations of lichen, which for the most part appear on the external surfaces of the limbs, together with the severe itching, will readily distinguish it from *eczema*, which is characterized by transparent vesicles, generally situated on the abdomen and on the internal aspect of the arms, accompanied merely with a slight prickly sensation. The *itch*, independently of its vesicular character, so different from that of lichen, generally appears on the limbs, in the line of flexion, in the folds of the joints, and between the fingers. The former is a contagious disease, and its vesicles are distinct, whilst the papulæ of the latter affection are crowded together and confluent. The papulæ of *prurigo*, like those of lichen, are developed on the external aspect and line of extension of the limbs; but they are broader, flatter, and their summit is generally torn, and covered with a small blackish crust, formed by a minute clot of blood. The itching is generally slight in lichen simplex, whilst it is burning and intense in prurigo.

Lichen circumscriptus may be confounded with *herpes circinatus*; but herpes is seated on a more inflamed base, whilst the former retains the natural color of the skin. The patches of lichen are papular at the centre, as well as at the circumference. The centre of herpes generally remains free; besides, the other is not a vesicular disease. The remains of the vesicles of herpes present a large number of small, round points, surrounded by a small, whitish border, formed by the epidermis which constituted the base of the vesicle, and which is detached. The surface of lichen is rough to the touch. The same marks will serve to distinguish it from *eczema*, with which it is very frequently confounded, and which never presents itself under this form of small circular patches.

Lichen urticatus, in consequence of the large size of the papulæ, may sometimes be mistaken for *erythema papulatum*, or *syphilitic lichen*. The patches of *erythema*, however, are much larger, less red, and not so prominent. They are never accompanied with that intolerable itching which usually attends this variety of lichen. The erythematous eruption is not reproduced, like lichen, soon after it has disappeared. The papulæ of *syphilitic lichen* are of a coppery color; they are not inflamed, like those of L. urticatus, nor accompanied with that continual pruritus. The

syphilitic papulæ are not fugitive, and they pursue a more tedious course than the former. Besides, there are generally other venereal symptoms present, as iritis, for example, which will clear up the diagnosis.

Lichen agrius, in its different stages, may simulate *impetigo, acute* and *chronic eczema*, and *psoriasis*. The confluent and ulcerated papulæ resemble acute eczema; but there are always a few papulæ to be seen scattered round the morbid parts, which will at once distinguish them. Lichen may be distinguished from *impetigo* by its small, thin, soft, slightly adherent scabs, which are generally surrounded with inflamed papulæ; whilst the elementary lesion of the latter—an eruption of pustules—is never observed in any form of lichen. It is much more difficult to distinguish it from *chronic eczema;* the itching, the thickening of the skin, and the presence of some papulæ, are the only distinguishing marks of lichen. The squamous crusts of *psoriasis* are always thicker than the furfuraceous desquamation of chronic lichen agrius. Unless in psoriasis inveterata, these scabs are succeeded by red and tumefied patches; but even then its characters are so well marked that it cannot be mistaken.

Prognosis.—Lichen is never a severe disease; but its obstinate nature, its frequent eruptions, and the annoying pruritus which accompanies it, make it a very troublesome complaint. Lichen simplex is especially a slight affection, and rarely continues longer than two or three weeks. Lichen agrius, on the other hand, is more rebellious and unmanageable. In lichen inveteratus the skin is dry, rough, and furrowed with deep wrinkles, especially about the joints. The exhalant functions of the skin where the eruption is seated are wholly suspended. M. Biett had observed it retain this dry character even in the vapor-bath. Lichen may be complicated with vesicles, with the pustules of impetigo, and even with those of ecthyma. Although it may continue for a long period, it always terminates favorably, by resolution or desquamation; and it is never converted into psoriasis or impetigo, as Willan alleged.

Treatment.—Acute lichen simplex requires no other treatment than diluents and tepid baths, or sometimes cold baths, which are often the only kind of service in *L. urticatus*. When it assumes a chronic form, acidulated lemonade, mild laxatives, and alkaline or sulphureous baths, are necessary. Tepid local baths, rendered emollient with the decoction of bran, and afterwards alkaline baths, containing the subcarbonate of potass, in the proportion of half an ounce or an ounce to four or five pounds of water. These remedies will in general suffice; but in some obstinate cases, friction with

the calomel and camphor ointment, or the proto-ioduret of mercury, may be advantageously employed.

In lichen agrius, if the patient be young and vigorous, venesection, and local bleeding by leeches round the diseased parts, will often be very seviceable, if practised at the commencement. Diluents, emollient applications, and severe dietetic regimen, and at a later period dilute nitric or sulphuric acid, should be given in barley-water, mild purgatives being at the same time administered. Sulphur or alkaline baths are very useful when the inflammation is subsiding; they aggravate the disease when employed at the commencement. In very obstinate cases, the arsenical preparations have been found of great service; Pearson's solution is the most appropriate for this disease. In these cases, and even in the chronic form of lichen simplex, M. Biett has used *Asiatic pills* with success, the patient taking one daily for a month or longer. In chronic lichen agrius, friction with an ointment composed of fifteen to twenty grains of the deuto-ioduret of mercury to an ounce of lard, is often attended with much benefit.*

* Lichen, in all its forms, is most frequently connected with some disorder of nutrition, and, in many cases, especially of the acute forms, symptoms of gastric or of intestinal derangement, or of both, are very evident. In such cases, the removal of the disease must of course depend upon the removal of this disorder as a cause. In many cases it will not be discovered on a superficial examination, and will be connected with some part of the *secondary* process of digestion, instead of the *primary*, and its removal depends not upon emetics and cathartics alone, but on a judicious course of alterative remedies, adapted to the particular case, as indicated by the character of the different secretions, and aided by long-continued attention to diet and hygiene. In fulfilling the indication in different cases, acids may be required in one case, and alkalies in another, and perhaps tonics, either with or without these in another; and with the particular remedy indicated, the general regimen and diet must be made to correspond. The indication for the one or the other of these remedies must be sought for in the character of the excretions, especially of the urine, from the examination of which, both chemically and microscopically, much valuable information may often be obtained. Diuretics are often very important auxiliaries in the treatment of lichen, both acute and chronic, and may be combined with any other of the means recommended. In cases which resist these remedies, and when there is no contra-indication, preparations of sulphur, or of mercury, or of arsenic, will sometimes be required, which will be assisted in their action by some form of sarsaparilla, or the extract or infusion of taraxacum, or of the yellow dock. The *chronic* forms of lichen are among the most intractable of cutaneous diseases, and when neglected or improperly treated, last for years, embittering life by the constant irritation which they produce.

To relieve the itching, which often constitutes the most troublesome symptom, and sometimes becomes a truly distressing one, a great variety of local means are recommended; but their success is so uncertain that they sometimes afford no relief at all, and, at other times, produce only temporary benefit. Among those which I have found most useful, are camphor mixture, either alone or in combination with acetate of lead, 5 grs. to ℥j of the mixture; a dilute solution of chloride of soda, or of lime; a lotion of muriate of ammonia, with vinegar and water, say ℥j muriate of ammonia, ℥iv vinegar, and 0j water; pyroligneous acid, 3j or more to 0j water. Sometimes a weak solution of nitrate of silver affords relief, especially when there is a discharge. More recently the known anæsthetic effect

PRURIGO.

SYN.—*Pruritus; Cresmos; Scabies papuliformis.*

This disease is characterized by an eruption of papulæ, larger than those of lichen, of the natural color of the skin, and commonly situated on the external surface of the limbs, and in the line of extension. It is an essentially chronic affection, lasting for months, and even years, and is accompanied with a burning and intolerable itching. It generally occurs about the neck and shoulders, but sometimes extends to the face, trunk, and limbs, and assumes a severe character. It is occasionally confined to a single spot. Willan describes three varieties—*Prurigo mitis*, *Prurigo formicans*, and *Prurigo senilis*—which are admitted by most dermatologists. The first two differ from each other merely in degree: there is no fundamental distinction between them. The last variety has some peculiar characters.

Symptoms.—Prurigo mitis appears in the form of minute, slightly prominent papulæ, perceptible to the touch, and accompanied with a distressing pruritus. This is the mildest form. *P. formicans* throws up larger, more prominent, and at the same time flattened papulæ, accompanied with a still more intolerable itching than the former, always aggravated towards evening, and by the heat of the bed; and which has been compared to the sensation that might be produced by innumerable ants gnawing the skin, or to that of hot needles piercing it. The papulæ are distinct, of the same color as the skin, if not torn by the nails, and are almost invariably seated on the back and external aspect of the limbs. There may be but few of them, and the itching is

of chloroform has led to its employment for this purpose, in the form of both ointment and wash. M. Cazenave recommends a wash of the strength of 15 minims to ℥iv of distilled water, to be put into a bottle which will hold double the quantity, for the purpose of shaking it up for use. (*Gaz. des Hôp.*, Dec., 1850.) The ointment may be used of the strength of 30 to 60 minims to ℥j of lard or spermaceti cerate. He has also employed with success the extract of aconite internally for the same purpose, giving from one to two grains, in divided doses, during the day. Sometimes one application will succeed after another one has been used with benefit for a time, and then lost its effect.

When *chronic* and local, ointments of different kinds may be used—of the besides those mentioned in the text, one first introduced into use in this city by I Crane, now of Brooklyn (L. I), consisting of nitrate of bismuth, 3 ij, citrine oi ment ℥j, and lard ℥ss, is very often effectual—also, a modification of it wh may be made by substituting stramonium ointment for the lard. Other ointme deserving a trial are, one of sulphur and carbonate of potash, or soda, ℥j or ℥ of the former, and ℥ss or ℥j of the latter to ℥j of lard; and creasote ointment, gtts. xx to xl to ℥j lard. The stramonium ointment also frequently affords decided relief.—H. D. B.

sometimes not so excessive. But in other cases, and especially in young subjects, they are very numerous. The itching is then so severe that the patients, in endeavoring to find relief, tear them open with their nails, and a drop or two of blood oozes out, and forms thin, black scabs, which, though accidental, are pathognomonic. Sometimes this thin black scab falls off and leaves an elevation, which is scarcely perceptible, and, in some cases, the papule even entirely disappears.

The papulæ which have not been torn disappear by absorption, or by slight desquamation, and the disease terminates in two or three weeks. More frequently, however, the papulæ continue for a long period, and the disease is prolonged for months by the development of a new eruption. In old people and in weakly children, prurigo often continues for two or three years, sometimes for an indefinite period. It becomes general, the papulæ are large, hard, and prominent. The eruption, which is accompanied with considerable thickening of the skin, is attended with occasional exacerbations, during which the papulæ become confluent. The skin is tumefied and inflamed; a number of vesicles, pustules, and boils are developed; and abscesses, accompanied with febrile symptoms, and those of gastric irritation, frequently supervene. It is in severe and rebellious cases of this kind that the patient is tormented with that distressing and insupportable burning pruritus, even a true description of which appears exaggerated and unfounded. When the papulæ are numerous and are frequently reproduced on the same parts, the cutaneous tissue is profoundly altered, and a number of small, slight cicatrices may be observed with the naked eye over the diseased surfaces.

Causes.—Prurigo occurs at all ages, but most frequently in children and old people, and at all seasons, but most during spring and summer. The exciting causes are low and damp situations, bad nourishment, infected beds, poverty, want of cleanliness, the use of salt food, shell-fish, privation, and strong mental emotions. But it appears in all conditions of life.*

Diagnosis.—The diseases with which prurigo may in particular be confounded are *lichen* and some of the *vesicular* eruptions. It is distinguished from lichen by the larger size

* It also appears in those who have indulged in luxurious living, especially when of full habit and past middle age; and is not unfrequently connected with derangements of the menstrual function, of which some striking instances are given by Alibert. Dr. Graves says (*Clin. Lect., Phila. ed.*, 1842) that P. *senilis* is generally accompanied by derangement of some of the important secretions of the body, but particularly of the urine. H. D. B.

of the papulæ, by the black incrustations, and by the intense burning itching. *Scabies* is the disease with which it is most likely to be confounded. The *papulæ* of prurigo are flattish and of the same color as the skin, whilst the *vesicles* of the *itch* are acuminated and rose-colored. The vesicles of the latter terminate in thin yellow scabs, and appear in exactly opposite situations to those in which the papulæ are developed, viz. on the abdomen, the internal surfaces of the arms and thighs, and in the line of flexion. The itching of *scabies* is much less severe. Prurigo is not contagious.* Prurigo may coexist with *lichen*, *scabies*, and *eczema*, and may be complicated with the pustules of *impetigo* and *ecthyma*. It terminates by resolution, or by furfuraceous desquamation.

Prognosis.—Prurigo is never a dangerous disease. It is, however, obstinate, unmanageable, and exceedingly harassing to the patient, and very liable to return. It is often incurable in persons of debilitated constitutions, who have suffered much from privation and from frequent repetitions of the disease.†

Treatment.—The treatment of the mild forms—*P. mitis* and *P. formicans*—consists in alkaline drinks, two drachms of the subcarbonate of potass to the pint, and simple baths. M. Biett was in the habit of ordering one part of the alkali to three of sulphur, which was generally attended with good effect. In severer cases, it may be necessary to have recourse to acidulated drinks.

When the constitution is broken down, and the digestive organs deranged, the patient will derive benefit from succulent and milk diet. If the skin is delicate and irritable, all irritating applications should be avoided; if, on the contrary, the skin is rough and dry, saline and alkaline lotions ought to be employed, and alkaline, vapor, or salt water baths alternately with them. Ointments are seldom of much use. When the pruritus is subsiding, friction with alkaline or sulphur lotions is often serviceable; earlier in the disease they are injurious. The internal use of opiates is sometimes necessary to allay the irritation produced by the excessive itching. In young persons and in children, sulphur combined with magnesia is often beneficial, and at the same time diluents, simple or emollient baths; and at a later period, alkaline baths in the proportion of one to four ounces of subcarbonate of potass to

* Prurigo sometimes returns habitually every spring and autumn, and may disappear without any treatment, neither of which ever occurs in *scabies*.
H. D. B.

† The irritation of prurigo when long continued has a tendency to injure both body and mind, and has been known to undermine the constitution, and even to induce mental imbecility. H. D. B.

each bath, according to the age of the patient. Venesection is seldom necessary, unless in young and vigorous subjects; it may be very injurious. All these measures should be accompanied with an appropriate regimen.

2. *Prurigo senilis vel pedicularis* scarcely differs from the preceding varieties as regards the papulæ; they are merely a little less raised, more flattened, and less numerous. The dryness of the skin, which is merely accidental in P. formicans, is a specific character of P. senilis; but the leading distinction is the swarm of insects with which the skin is infested in the latter affection. It most commonly attacks old people. M. Biett, however, observed it in a young woman immediately after child-birth. Nevertheless it almost invariably occurs in debilitated persons in the decline of life.

Old people of strong constitutions are seldom attacked. The skin becomes brown, its functions are disordered, and it is covered with insects, which are multiplied and reproduced with surprising rapidity. The insects are usually of the genus *pediculus*, but those of the genus *pulex* have been seen. The presence of these insects is sufficient to prevent prurigo senilis from being confounded with any other affection. It is a severe disease, and is often incurable. The remedial measures already pointed out are also appropriate for this variety; but the sulphur baths should be used more freely. Cinnabar fumigation is by far the most effectual remedy; it destroys the pediculi in a very short time, and is much preferable to mercurial friction. The general health of the patient should be recruited with tonics, the preparations of iron, &c., and the utmost cleanliness should be observed.*

* The obstinacy of the disease in many cases will often tax the resources of the practitioner to the utmost. Watson (*Lect. Prac. Med.*) recommends sarsaparilla, alkalies, arsenic, the iodide of potassium, and dulcamara, as among the most hopeful remedies. Dr. Graves (*Clin. Lect.*) speaks of nitric acid with sarsaparilla, and cream of tartar with powdered bark, as among the best remedies for P. *senilis*. When preceded by a scanty flow of urine, the diuretic remedies, he says, often effect a great deal, and must be varied according to circumstances, and combined with articles calculated to improve the state of the digestive organs. I have derived by far the most benefit from the sulphuret of potash, and have given it in pill, in combination with laxatives, as rhubarb or aloes, with small doses of ipecac, and sometimes with quinine, or in solution with extract of sarsaparilla or rumex, or the two combined. The diet must be adapted to the constitution and age of the patient, but, as a general rule, must be nutritious, but simple and unstimulating in those past middle life. Tepid baths, and especially of salt water, assist materially in the cure. Alkaline and sulphurous baths also often do much good.

To relieve the itching, which is often intense, various means have been used besides those mentioned under the head of lichen. Dr. Graves speaks very highly of a lather of soap and warm water, the water to be as hot as the patient can bear it, applied with a very soft brush or sponge—also afterwards sponging the parts at bedtime with hot whiskey and laudanum, 0j of the former to 3j of the latter; also of the following liniment, which he considers as one of the best applications in this disease, viz. ℞ Acetate of lead, 3j; wine-vinegar and water, āā

Several local varieties have been described, in which it is very difficult to distinguish the papulæ, but they are evidently allied to prurigo by the intense itching which accompanies them. The pruritus may be confined to a small surface, and constitute certain varieties, of which the most interesting are *P. genitalium* and *P. podicis.*

Prurigo genitalium occurs on the scrotum in men, and on the pudendum in females, and may in both cases spread to the neighboring parts. It often extends to the vagina, producing nymphomania. It may coexist with P. podicis. When it occurs in men, an exudation of sebaceous matter takes place. In general there are no papulæ present, but in some rare cases very slight papular elevations may be detected with the finger. The skin of the scrotum becomes brown, and sometimes thickened; there is always an intolerable itching, which exacerbates, and the patients scratch and tear themselves in the vain attempt to obtain relief.

When it occurs in females it is still more distressing. It frequently excites onanism, voluptuous desires, and violent nymphomania. M. Biett observed a case of this kind in a woman sixty years of age. He examined the parts with a lens, and could not discover any lesion. Nevertheless, this female was excessively addicted to self-pollution. The disease commenced with slight itching of the genitals, which became gradually augmented until it assumed the character of nymphomania. The patient frequently fainted on seeing young men. The intense burning pruritus, and the absence of all redness, and of vesicles, distinguish this affection from certain varieties of *eczema* which are developed in the same region, and accompanied with itching. P. genitalium often occurs without any appreciable cause. The rubbing of the under garments against the parts, violent exercise in warm weather, and the general causes of prurigo, may influence the development of this distressing complaint. It is sometimes the result of leucorrhœa when long continued, and it also frequently occurs at the critical period. It often coexists with *P. podicis.*

Prurigo podicis differs from the preceding variety merely

℥ ij, rubbed up with enough olive oil to make a liniment—to be shaken up when used—a lotion of dilute prussic acid, 3 j to ℥ vj or ℥ viij almond emulsion is recommended, but should be used with caution; also a lotion of bichloride of mercury, even as strong as 3 j to 0ss of water in old persons, and in some of the bad forms. Watson says (*Lect. Prac. Phys.*) that he once relieved a case by anointing the itching surface with an ointment containing a small quantity of aconite when other means had been tried in vain. The tincture of the root of this aconite might, perhaps, be a useful application, and also a lotion or ointment containing veratrine. H. D. L.

in its seat. It most frequently appears in persons of sedentary habits. It is often an accompaniment of hæmorrhoids, ascarides in the rectum, or chronic inflammation of that intestine. The patient experiences an intolerable itching about the sphincter of the rectum, which extends upwards in the gut for some short distance, and is always increased towards evening, and after a hearty meal.

These local varieties of prurigo are sometimes exceedingly severe complaints. They are always very rebellious, and it requires considerable tact and attention to allay the itching. Sometimes it yields to the application of leeches round the parts, together with emollient, cold, and narcotic lotions, and afterwards the alkaline and sulphureous water baths. Sulphur and cinnabar fumigations are also often very useful in these cases. M. Biett invented an apparatus by which the vapor of sulphur and mercury can be applied to the diseased part alone, which is in daily use at the Hospital of St. Louis. It has this advantage, that the rest of the body is preserved from the immediate contact of these vapors, and from the debility which must necessarily ensue. However, notwithstanding the employment of these several remedies, prurigo genitalium has often continued for six months and longer. We have known it continue for years. It often subsides for a certain period, and then reappears in its original form and intensity.*

* The excessive itching which occurs on the genitals and about the anus sometimes arises from other causes than prurigo, and must then be treated accordingly. When dependent upon this, or any other cutaneous affection, it will generally be found to be connected more or less with constitutional causes, and these various and sometimes opposite in their nature, which require attention, at the same time that local means are used to relieve the itching as a symptom. Of *local* applications, a great variety have been recommended, some of which afford temporary relief, and others fail altogether, and hence the convenience of having several on hand for trial. In addition to those already mentioned, are the nitrate of silver in solution, of different degrees of strength, and in substance; also tobacco in form of infusion or poultice, or ointment of the oil, which, however, must be used with caution; diluted lemon juice; also black wash, yellow wash, preparations of lead, both of the acetate and carbonate, &c. In some cases warm fomentations answer best, and in others cold and even iced applications, and sometimes an alternation of the two.

Dr. Simpson, of Edinburgh, mentions brushing the affected surface in severe and distressing cases of prurigo of the cervix, vagina, and vulva, often with hydrocyanic acid (of the strength of that of the Ed. Pharm.) as often giving the greatest relief.—(*Month. Journ. Med. Sci.*, Ap. 1850.)

Dr. Meigs, of Philadelphia, recommends a solution of borax in rose water, with a small proportion of sulphate of morphia, in this affection, to be applied by means of a sponge or cloth wet with it, after having washed the parts with warm soap and water, and wiped them carefully.

Wilson says that the lotion upon which he chiefly relies to relieve pruritus in different eruptions, is one composed of bichloride of mercury, from 5 to 10 grains, spirit of rosemary and spirit of wine, of each an ounce, and six ounces of the emul-

sion of bitter almonds. He has also sometimes succeeded with a lotion of chlorate of potash.—(*Dis. of Skin*, Phil. edit. 1847, p. 159.)

It is sometimes necessary to tie up the hands in a bag, to prevent the patient from adding to the irritation by scratching. H. D. B.

SQUAMÆ.

This order comprehends certain chronic diseases of the skin, characterized by the formation of inorganic laminated scales of a greyish-white color, dry, friable, more or less adherent, and of various degrees of density. These whitish lamellæ of the cuticle are called *squamæ;* they are always elevated above the skin, which remains red and inflamed after they fall off. They are the result of a morbid secretion of the epidermis, and are very different from those vesicular incrustations already spoken of, which depend on the concretion of a serous or sero-purulent fluid. The squamous diseases are essentially chronic in their nature; they are in general very slowly developed, but sometimes they run on rapidly, and the eruption is completed in two or three days. Their duration varies from a few months to several years.

Symptoms.—They generally commence with a few red, slightly elevated, and distinct patches. Sometimes these spots unite and become confounded together, and are speedily covered with laminated scales. The formation of the eruption is rarely attended with constitutional disturbance. Indeed, the patient is frequently not aware of the existence of the disease until the patches are fully formed, or the cuticle is on the point of being detached.

The squamous eruptions occur most frequently on the limbs; however, they are also met with on the head and trunk. Sometimes the patches are distinct, scattered here and there, and are limited in number; but they are often diffused over the whole extremity, and form a kind of general envelope. The lamellæ present some difference of formation, according to the variety to which they belong: thus, for instance, they are often thin and flimsy, as if composed of one or two layers of the cuticle, which become dry and whitish, and are detached with much facility, and in great abundance; in other instances they are firm and adherent, and consist of hypertrophied portions of the epidermis. The long list of symptoms described by authors is rarely met with; a slight degree of heat and itching are the most usual concomitants. When the disease occurs in the vicinity of

the joints, the movements of the latter are stiff and painful; and if the eruption is of long standing, the skin becomes indurated and thickened.

Causes.—None of this class of diseases are contagious. They are sometimes hereditary, and one of them (*ichthyosis*) is most frequently a congenital affection. They are not confined to any classes of society, to any age, or to either sex; but they generally occur in adults. They appear in the rich as well as in the poor, and are supposed to prevail more frequently in autumn than in any other season, if there is really any difference.

Diagnosis.—The diseases belonging to this class cannot be mistaken for any other cutaneous disorders. The presence of the laminated scales is alone sufficient to distinguish them. The vesicular, pustular, and papular incrustations and scales are very different in formation and appearance from true squamæ; besides the presence of vesicles, of pustules, or of papulæ, in the neighborhood of the eruption, which can always be detected with a little attention, will at once indicate their real nature. They are never attended with the formation of the thin, dry, micacious looking scales peculiar to the squamæ. These diseases are never dangerous, but are always rebellious, and require an energetic plan of treatment. This order contains four species—*lepra, psoriasis, pityriasis,* and *ichthyosis.* Although some writers have objected to the latter affection being included amongst the squamous diseases, we shall describe it, along with Willan, as belonging to that class.

LEPRA.

Syn.—*Lepra vulgaris; Psoriasis circinata; Dartre furfuracée arrondie;* Scaly leprosy.

The Arabians considered *elephantiasis* as synonymous with *lepra,* a term which they used indiscriminately for all severe and obstinate diseases of the skin, however different they might be from each other in their elementary characters. Medical writers are now, however, agreed in designating by the word lepra a squamous affection of the skin, characterized by circular scaly patches, with elevated borders and depressed centre, and which may run together and form a continuous patch.

Willan has described two varieties of this disease, *L. alphoides and L. nigricans,* which, as we do not intend to describe separately, we shall simply mention here. The first, which occurs chiefly in children and debilitated subjects, differs from lepra vulgaris merely by the smaller si[illegible]

whiter color of its patches. The other is an exceedingly rare affection, of the nature of which we possess little positive information. We believe it to be in the majority of instances a variety of syphilis. We have, however, seen two cases in M. Biett's ward that were decidedly not syphilitic.

Symptoms.—Although lepra may appear on every part of the body, the limbs, the neighborhood of the joints, particularly the knees and elbows, appear to be the special seats of the disease; at least it is in these regions it generally commences, in the form of small, red, scarcely perceptible spots, slightly elevated above the level of the skin. These patches, which are smooth and shining at first, are soon covered with a very thin lamella, which is not long in falling off. They gradually increase, always preserving their circular form; the scales are renewed and become thicker, especially at the circumference; which is elevated above the rest; at the same time the centre remains intact, if we except some rare cases in which one or two isolated patches are covered all over with the squamous crusts.

These patches are sometimes several inches in circumference, but generally smaller. They usually vary, however, in size from that of a shilling to that of a crown piece. The centre is depressed and of the natural color, whilst the borders are elevated and covered with an imbricated layer of whitish adherent scales. The annular patches are not always entire and distinct; they often become intermixed and confounded with each other, especially about the joints, as the knees and elbows; and it is in consequence of this that some authors have alleged that there is no distinction between lepra and psoriasis, but that, in point of fact, they are one and the same disease. With a due regard to accuracy, these affections cannot be described as one. Lepra vulgaris and psoriasis are much more distinct from one another than herpes zoster from herpes phlyctenodes; wherefore we shall still continue to describe them separately.

Whilst the scabs are thus individually increasing in diameter, the eruption is becoming more general, and extending progressively to the abdomen, back, shoulders, chest, sometimes to the scalp and forehead, but rarely to the face or hands. The scales fall off and are renewed incessantly. Their bases are red, slightly inflamed, smooth when the eruption is recent, but furrowed and wrinkled when of long standing. These are the characters exhibited by lepra in the generality of cases; but it sometimes appears with very different and very remarkable symptoms. Thus, for example, the eruption, deviating from its ordinary course, appears in the form of small red circular points, which unite at their edges,

and by their eccentric arrangement they acquire an enormous size, and the patches are not covered with scales, or if they happen to be so, and fall off, they are never renewed. We have observed several patients at the Hospital of St. Louis in whom this variety was well illustrated.

The trunk, and particularly the back, was the seat of broad red patches, sometimes more than a foot in circumference. These patches were formed by a prominent circular ring but a few lines broad, accompanied on both its edges with a reddish border, also but a few lines in breadth, and quite free in every part from scales. Sometimes two or three of these circular rings extended over the whole of the back; and even, in some cases, there was only one large ring. We have observed that in other localities, as the limbs, the patches were developed in the ordinary manner, and pursued the ordinary course of the disease, as above described.

Lepra may exist for a long period without occasioning any bad symptoms, unless the vital functions become altered; but it generally produces a stiffness about the joints, the movements of which cannot be accomplished, frequently, without considerable pain. The ulcerations and cicatrices which sometimes form are the result of some severe complication; they do not belong to this disease properly speaking. If left to itself, lepra may disappear and return quickly again, or it may continue for a long period, and require very energetic treatment. However, from whatever cause it subsides, its cure is always slow and protracted. The patches first begin to fade in the centre, the scales diminish in number, they cease to be renewed, and the process of cure invariably proceeds from the centre to the circumference. The circular rings break in many places, the raised borders sink, and the patches finally disappear. In that variety, where the disease manifests itself in the form of those large red circles without scales, above described, the morbid surfaces become much more inflamed immediately before disappearing, the raised edges then quickly fade, and some portions are here and there reduced to the level of the skin; the color also fades, and there only remains a slight erythema, which is not long in disappearing.

Causes.—Lepra is not contagious; it appears in
but most frequently in autumn. Men are m
affected than women, while women, on the
more subject to certain forms of psoriasis, s
psoriasis guttata: children are seldom atta
of lepra are but little known. It ma
and damp atmosphere. It fre
partaking of salt food and sea

dispose to the disease; for instance, those who are daily in the habit of handling and being otherwise in contact with pulverulent substances, metallic dust, &c., are very liable to it. It results more frequently from strong mental emotions, than from any other causes. Thus, it is by no means uncommon for lepra vulgaris to supervene after violent fits of passion, grief, or fright. It may also be hereditary.

Diagnosis.—The diagnosis of lepra is ordinarily very easy, and the slightest attention will enable the observer to distinguish it from all other diseases. We shall, however, recapitulate the peculiar characters which distinguish it from certain cutaneous affections with which it has been sometimes confounded.

1. *Porrigo scutulata* (*ringworm*), at certain periods of its progress, either at the commencement or at the end, when the crusts fall off and leave behind red, annular-shaped patches, may for a moment be mistaken for lepra of the scalp, especially if there are patches on other parts of the body at the same time. But P. scutulata occurs as seldom on the trunk and limbs, as lepra appears on the scalp; and besides the elementary characters of the former—favous pustules—which are always present in the neighborhood of the rings, will at once indicate the true nature of the disease. The appearance of the scabs, the destruction of the hair, and the contagious character of P. scutulata, will prevent the possibility of these two affections being confounded with one another.

2. *Syphilis.* The circular form of the patches of tubercular syphilis on the forehead and back, sometimes resemble those of lepra. But the coppery and violet color, and the cicatrices which are always present in the neighborhood of the eruption in the former case, together with other concomitant symptoms, will readily distinguish it. Moreover, if the patches are carefully examined, they will be found, not perfectly continuous circles, but isolated tubercles, arranged in an annular form, and having distinct intervals between them. They are smooth and shining, and are not covered with scales, unless in some rare cases, and then the lamellæ are extremely hard and thin, and cover only a part of the circumscribed induration. Sometimes, when the tubercles begin to undergo resolution, and are less prominent than in their earlier stages, they may also be mistaken for leprous rings in the act of healing. A knowledge of the distinctive characters of each disease, as above described, will obviate this error.

3. If we compare lepra with the irregular patches of *psoriasis*, the only affection of the same order with which it can for an instant be confounded, we may see at a glance the marked distinction that exists between them. There is, how-

ever, one variety of the latter disease, *psoriasis guttata*, characterized by isolated patches, which it is difficult to distinguish from lepra during the process of cure. The patches of P. guttata are always smaller and more irregular than those of lepra, and their centres are never round nor depressed like those of lepra; and even during the process of cure, when a portion of the circular rings of lepra disappear, that which remains will always suffice to distinguish the disease. Finally, when the patches of the latter affection become agglomerated and run into one another, there are always some portions of the rings distinctly visible, either in the neighborhood, or even in the centre of the diffused patches, or on other parts of the body, or some new spot will be seen in the process of development, which will leave no doubt as to the nature of the eruption.

Prognosis.—Lepra is never attended with danger, but it is always a very rebellious and is frequently an incurable disease.

Treatment.—The treatment of lepra consists in external, internal, and hygienic measures; but before adopting any plan of treatment, the age and strength of the patient, and the state of the eruption, should be carefully considered. When the patient is young and vigorous, and the disease has pursued a rapid course, at the same time that the skin is red and inflamed, and the pulse full and quick, venesection, simple baths, diluents, strict regimen, and quiet, will be necessary. In old and feeble patients, and those whose constitutions are broken down by excess or by privation, in whom the eruption is never attended with inflammation, it will be advisable to administer a course of tonics, in order to invigorate the health, with the view of having recourse to more energetic measures at a later period. If these precautionary measures are attended to, the disease may then be vigorously attacked, both externally and internally.

The external agents, when employed alone, are generally inefficacious, and are sometimes even attended with inconvenience. We shall not enumerate the various irritating applications employed by the ancients in this disease. They should, in our opinion, be rejected, together with blisters and cauterization, from the treatment of lepra. With regard to external remedies, we have frequently seen the application of a gently stimulating ointment, no matter of what kind, attended with the greatest success. But here an important question presents itself for consideration, namely, whether is an external or internal plan of treatment the most appropriate for lepra? Our own experience, and also that of M. Biett, goes to prove the inefficacy of the former whenever employed alone. In

nineteen cases out of twenty, the external applications produce merely a momentary amelioration of the complaint. We have often observed the disease return in less than fifteen days after being *cured* by some of the supposed infallible ointments.

External applications are, however, useful auxiliaries during the internal treatment, especially towards the decline of the eruption. They should not be employed alone unless in very rare cases, when the disease is recent and confined within a small compass. Amongst those which we have seen attended with the most advantage at the Hospital of St. Louis, in lepra as well as in other cutaneous diseases, we may mention an ointment composed of the ioduret of sulphur in the proportion of twelve to fifteen grains to an ounce of lard; the sulphur may be increased to half a drachm. This should be rubbed over a certain number of the patches morning and evening. It stimulates the skin gradually into a certain degree of inflammation when the squamæ are thrown off, and their elevated borders sink and fade. In the course of a few days the skin is restored to its natural color, and then other patches ought to be treated in the same manner. Tar ointment also produces a rapid but most frequently only a temporary disappearance of the eruption. The patient should continue to take some bitter infusion—dulcamara, mezereon, &c. —while the ointment is being employed.*

Baths are also very useful adjuvants towards the cure of lepra, especially sulphur and salt-water baths, which undoubtedly modify and alter the progress and condition of the eruption. The vapor bath, however, excels all the others as a local application. It increases the circulation, stimulates the skin into more healthy action, detaches the scales, and bedews even the diseased parts with a gentle perspiration. The sulphur fumigations are by no means so efficacious as some writers would have us believe. In the majority of cases they produce merely a transient modification of the disease. It is a fallacy to say that lepra can be cured by external remedies alone, which are often not only useless but even injurious. We must have recourse to internal treatment to remove this disease effectually. Amongst the internal remedies which have sometimes proved serviceable, we may mention the decoctions of dulcamara, much extolled by Carrére and Crigh-

* White precipitate ointment, and ointments of proto-iodide and deuto-iodide of mercury, the strength to be varied according to the irritability of the skin in the particular case, are often useful when the disease is limited in extent and of long standing. Creasote ointment also assists in its removal, and M. Emery recommends naphthaline ointment, 3 j to 3 ij to ℥ j lard. Sometimes the most simple ointments, and at other times narcotic ones, succeed best. H. D. B.

ton; of mezereon, and ormis pyramidalis bark, the watery extract of white hellebore, rhus radicans, rhus toxicodendron, &c.; their virtues, however, are very uncertain. Dulcamara is more favorably known than the other articles enumerated, but M. Biett has not found it attended with such good results as those who first recommended it. It may, however, prove of service, and deserves further trial. Sulphur appears to be in some cases a useful auxiliary. The sulphuret of antimony is always unsuccessful. Mercury in the metallic state, and in the form of the deuto-chloruret, has not been more efficacious. Calomel alone has often succeeded, but it seemed to act as a purgative. Pitch or tar has been followed with variable results.

The result of M. Biett's experience at the Hospital of St. Louis goes to prove that the most successful internal treatment consists in the exhibition of *purgatives, tincture of cantharides* and the different preparations of *arsenic*. 1. *Purgatives.* These are generally most serviceable when the disease is recent and of limited extent, especially in children. Calomel may be administered every morning fasting, in four-grain doses, either alone or combined with the same quantity of jalap. Sometimes from two drachms to half an ounce of the sulphate of soda or of magnesia in a pint of some bitter infusion, produces a good effect. In other cases, more active purgatives, as aloes, colocynth, scammony, and gamboge have succeeded, more particularly when combined. It is difficult to select any particular remedy beforehand. The choice should be guided by the condition of the patient, the state of the eruption, and the effect of the medicine previously employed. Calomel, however, continued as directed for two months or more, is admitted to be attended with most success. It often produces a complete cure within that period. In some instances, it is true, it produces salivation, but the cases are very rare in which it will be necessary to push the medicine to that extent. It is an invaluable remedy in children, and should be administered in sugar, in doses regulated according to the age of the patient. Its action is not quick and rapid in any case. It operates slowly but surely in establishing a cure. None of the medicines, which it will be necessary to continue for any lengthened period, should be administered in other than small and divided doses, as the action required is that of gradual and certain derivation, and not that of active and sometimes injurious revulsion. It is often very advantageous, and sometimes even necessary, to suspend the treatment for three or four days, and then commence anew.*

* In the last edition of the work, the whole of this paragraph respecting purgatives is left out, and no mention is made of their use in the treatment of this disease. H. D. B.

2. The *tincture of cantharides* is more useful in cases where the disease has reappeared without any evident cause, when it is diffused, and has resisted the action of purgatives, and when it occurs in subjects of a soft and lymphatic constitution. It ought to be prescribed in doses of from three to five drops every morning in a little water, and the dietetic regimen should be at the same time severe. The effects of the medicine ought to be carefully watched, and if it does not produce any irritation of the digestive or genito-urinary organs, the dose may be increased five drops every six or eight days. If, however, it produces heat at the epigastrium, nausea, vomiting, *ardor urinæ*, erection of the penis, &c., circumstances which rarely occur, the medicine should be suspended immediately; but when administered with caution, and by gradually increasing the dose, the latter may be extended to twenty-five or thirty drops and beyond, without occasioning any evil result. It generally effects a cure, especially in females, in the course of forty-five to fifty days, and we have seen a case of lepra at the Hospital of St. Louis of eighteen years' standing disappear in the course of a month under the influence of this remedy.*

Arsenical preparations must be had recourse to if the disease resists all the remedies already enumerated, when it is of several years' standing, and diffused over a large surface of the body, when the skin is thickened, and its condition otherwise altered. They often have a most surprising effect even after all other remedies have failed. The preparations of arsenic commonly used are Pearson's and Fowler's solutions, and if the proper precautions be observed, these are invaluable remedies, and no more dangerous than any others. Pearson's solution, the mildest form in which arsenic can be given, should be prescribed in doses of a scruple to half a drachm or a drachm; and Fowler's solution, which is much more active, is to be given in doses of three drops to begin with, every morning fasting, which may be increased two or three drops every five or six days until twelve or fifteen drops are taken daily; but it should never exceed this, and, like the tincture of cantharides, it will be desirable to suspend its use from time to time, and when employed again, we should begin with the smallest doses mentioned. Sometimes, when Pearson's solution fails, that of Fowler will be attended with success. Should any symptoms of gastro-intestinal inflammation supervene, it will be necessary to suspend at once the employment of both these remedies; but at the same time care should be taken that there are good grounds

* Mr. Wilson says (*Dis. Skin*) that the best mode of giving tincture of cantharides is in combination with equal parts of tinctura opii camphor., and taken with tinct. cinchonæ. H. D. B.

for depriving the patient of the salutary effects of such valuable remedies. The preparations of arsenic are, no doubt, very dangerous remedies in unskilful and incautious hands; but administered with tact and attention to the precautionary measures, they will not produce any ill effects; on the contrary, they will be of incalculable service in promoting the cure of the disease. When first administered, they usually stimulate the morbid parts into greater activity. The patches become less insensible, the centres heal, and the circular rim breaks down and gradually fades, so that in the course of a few months, sometimes less, a severe and inveterate disease, which has existed for years, may vanish under the judicious employment of the above mentioned preparations of arsenic.*

Hygienic measures are very serviceable as adjuvants, especially in preventing a return of the disease. The diet of the patient should be restricted, the use of ardent spirits strictly prohibited, and the causes of the disease, if possible, avoided. The trade or vocation of the individual often exercises much influence on the development of the eruption, in the event of which it will be necessary to give it up, at least for a period.

[The iodide of arsenic is very efficacious in obstinate cases of lepra. The dose to begin with is about the tenth of a grain, to be given three times a day. It may be increased to a quarter of a grain. The iodine acts on the absorbent system, while the arsenic alters the vitality of the skin.

My attention was directed several years ago, by Mr. A. Walker, to a preparation of sulphur and iodine, the vapor of which is an admirable local application in a variety of cutaneous diseases. These remedies combined, seem to possess healing properties which are not manifested when they are used separately. When employed judiciously, and in appropriate cases, they appear to alter the vitality of the morbid parts, and to induce a state of healthier action. If the eruption is indolent, they generally stimulate the diseased surface into greater activity; and by regulating the strength of the medicine, according to the nature of the case and the object in view, the most salutary effects may often be

* For a paper on the use of arsenic in diseases of the skin, by Mr. Erichsen, well deserving careful study, see Braithwaite's Retrospect, No. VIII., p. 10, Amer. Ed., taken from London Med. Gaz., May, 1843. In the same valuable republication (No. XXII., for Jan., 1851) will be found an abstract of valuable practical remarks by Mr. Thomas Hunt, on the medicinal action of arsenic in cutaneous and other diseases, taken from the Medical Times (London) for Aug. 10 and Sept. 14, 1850. He insists particularly, and with great propriety, that arsenic should never be given on an empty stomach, but always with or after a meal; and also that it should never be administered in increasing doses. A memoir on this subject by the same writer was published in the Trans. of the Prov. Med. and Surg. Assoc., vol. xvi.
H. D. B.

derived from its use. I have seen cases of lepra, of several years' standing, which had resisted every other treatment, cured in a very few months by the application of the vapor of sulphur and iodine. It is particularly applicable to squamous and tubercular diseases, and to foul, ill-conditioned ulcers of the lower extremities. It may be administered in this form—℞ sulphuris, ʒ iij; hyd. sulph. rubri, ℈ ij; iodinii, gr. x. M. fiant pulv. sex. One of the powders to be used in the following manner three times a day:—If the disease is seated on the limbs, a tin case, or even a common jar—which will answer as well, provided it is large enough to hold the limb—should be procured, a heated iron is to be placed at the bottom of this apparatus, with a grating above it to protect the foot or hand. One of the powders being placed on this heated iron, the limb is to be instantly put into the bath, the top of which should be covered over, to prevent the vapor from escaping. The limb may be continued in the bath for from fifteen to twenty minutes, according to circumstances. In the course of a day or two the proportion of iodine may be increased; for example, thirty grains of iodine, and at a later period double that quantity, may be incorporated with an ounce and a half of the flowers of sulphur, to be divided into twelve powders, and used in the same manner as the former.

I do not mean to extol this preparation as a specific for the cutaneous eruptions indicated above; nevertheless, I think it is worthy the attention of practitioners, and that it will often be found a very efficacious remedy. B.]*

* The liquor hydriodatis arsenici et hydrargyri, a compound of iodine, arsenic, and mercury, first made known to the profession by Mr. Donovan, of Dublin, and hence often called "Donovan's liquor," has proved successful in the treatment of many cases of long standing and obstinate lepra and psoriasis, as well as in some other cutaneous diseases. Details of its composition and effects will be found in numbers II. and IV. of *Braithwaite's Retrospect*. The dose, as recommended by Mr. Donovan, and used by others whose cases are reported, is from twenty drops to half a drachm, three times a day. I have been pleased with its effects in several cases, but have seldom given more than fifteen drops at a dose, three times daily, and have had patients who could not get so far as ten drops at a dose without unpleasant effects. It is a powerful remedy, uniting the properties, to a certain extent, of the three *heroic* remedies of which it is composed, and must be used with corresponding caution. It is most prudent to commence with a small dose, and increase the quantity every few days, as the patient can bear it. Irritation of the stomach or bowels, or of both, has usually been the earliest of its unpleasant effects in my experience, and requires its suspension if it increases or continues under its use. It may be given in the tincture or syrup of ginger, or in any aromatic infusion. H. D. B.

PSORIASIS.

SYN.—*Psora leprosa; Dartre ecailleuse; Dartre squammeuse lichenoide.*

Psoriasis is a chronic inflammatory cutaneous disease, characterized by patches of various extent, irregularly formed, slightly raised above the level of the skin, and covered with thin, dry, white scales. There are several distinct varieties of psoriasis, depending either on the degree of intensity or on the situation they occupy. In one variety the patches are distinct, small, and scattered; in another they are larger, confounded together, and irregular; in a third they are still more extended, and form one continuous surface; and in a fourth they appear twisted or in lines. Hence the names, *Psoriasis guttata, diffusa, inveterata, gyrata.*

1. *Psoriasis guttata* is a mild form of the disease, and appears to be an intermediate affection between lepra and psoriasis. It is characterized by small red distinct patches, irregularly rounded, raised at the centre, covered with thin white scales, and seldom exceeding two or three lines in circumference. It first appears in the form of small, distinct, red points, in the centre of which a very thin scale is soon seen. The patches always remain isolated, and the interstices between them are sound, and retain the natural color of the skin. Their appearance is that of large drops of fluid, scattered over the surfaces on which they are seen. The scales are more or less adherent, and on falling off leave bright red, slightly painful, and prominent patches. This variety is met with on every part of the body, but most frequently on the back and on the external aspects of the limbs. It is rarely accompanied by febrile symptoms; but the heat of the bed towards evening, and in the night, occasions a slight degree of itching, and the scales, when scratched off, or when they desquamate naturally, are quickly reproduced. It appears most frequently during spring and autumn, and disappears in summer or in winter. This is not a rare variety of the disease, nor is it very severe. It occurs oftener in adults than in children or old people. It sometimes coexists with one of the other forms of psoriasis.

2. *Psoriasis diffusa* occurs in the form of flat, angular, irregular, and larger patches than the foregoing. They are at first red, of a papular form, and distinct; they speedily unite and form continuous surfaces, covered with thick, whitish, and pretty adherent scaly incrustations. Although it may appear on every part of the body, the limbs are much more frequently

affected than any other part. It is by no means uncommon to see one continuous patch covering the whole of the anterior surface of the leg, or the posterior aspect of the fore-arm. The elbows and knees are constantly affected; and even when it has disappeared from any other part of the body, it will remain fixed in these regions, from which it will be difficult to remove it. In some rare cases, the disease appears simultaneously on different parts of the body. We have seen cases, at the hospital of St. Louis, in which it covered the greater part of the back, abdomen, and both arms, spreading down to the fingers, which were encased as with a glove. Beneath these scales the surface is very red and polished.

Psoriasis diffusa is generally preceded by slight constitutional disturbance, together with a troublesome severe itching, which, however, soon subsides, and disappears when the eruption is developed. In some cases the patches are not inflamed, and the patient merely complains of slight formication; but in a few rare instances there is considerable inflammation present; the patches are prominent and the scales thick, and painful fissures and chaps are established, which annoy the patient considerably. P. diffusa generally attacks adults; nevertheless, it sometimes occurs in young children (*P. infantilis*, Willan), and its progress in those cases is often remarkably rapid. It is always a severe and intractable disease; lasting frequently for months, and even for years.

3. *Psoriasis inveterata* is the same affection as the foregoing, but of a more severe form. It occurs most frequently in aged persons and in broken-down constitutions, and often attains a high degree of intensity. The skin becomes thick, hard, and hypertrophied; it is split in different directions, and the scales are no longer of the usual size and thickness, but a sort of furfuraceous desquamation takes place, which fills up the furrows of fissures, and is readily detached. Sometimes, in these cases, the morbid surfaces are entirely deprived of scales, and are red, slightly inflamed, and furrowed in every direction. On pinching up the skin between the fingers, it is found to be deeply altered, and feels rough, hard, and uneven. The eruption is sometimes confined to the limbs; in other instances, it spreads over the whole body; and in some rare cases, the patient seems as if incased in a scaly envelope. The slightest movement of the joints produces deep, bleeding, and painful fissures. The nails are also affected; and are misshapen, rough, and ragged; they split into pieces, and are replaced by misshapen, scaly incrustations. This variety is occasionally complicated with inflammation of the mucous membranes, particularly of the intestinal canal; but this never

occurs in young and vigorous subjects. This is the most severe form of psoriasis.

4. *Psoriasis gyrata* is a very rare variety of the disease, for which lepra and some syphilitic eruptions have been often mistaken. It consists in long, narrow, tortuous, or spiral-formed stripes, resembling worms; and sometimes bending into rings, occurring generally on the back. M. Biett has seen but a few cases of this kind amongst the external patients at the Hospital of St. Louis. Willan gives a good description of it. We have observed many intermediate forms of the disease, between the four varieties now described, which, with one remarkable exception, we shall pass over for the present. We have occasionally observed, in young persons of fair complexion and fine delicate skin, regularly rounded patches, the borders or centre of which were not raised. The circular patches were almost always distinct, flattened, and about the size of a crown piece, covered with thin slight scales, which adhered only slightly to a rose-colored and very slightly inflamed base. It occurred most frequently on the body and arms.

There are some more essentially local varieties of the disease which present several peculiarities worthy attention.

1. *Psoriasis ophthalmica* appears sometimes in small squamous patches, seated about the angles of the eyes and on the eyelids, which are swollen, tender and painful, especially when moved. Although it may be accompanied with an analogous eruption on the face, it often occurs alone, particularly in children. It often occasions a smart itching, and spreads to the conjunctivæ, when the disease is very obstinate.

2. *Psoriasis labialis* occurs generally alone. It appears in the form of a circle about half an inch broad, which surrounds the mouth. This circle gives off a number of lines, giving the parts a puckered appearance. These lines project from the circumference all round to the borders of the lips. The epithelium is thickened, the scales are larger than in the other varieties. It is generally a very obstinate affection.

3. *Psoriasis præputialis* also occurs alone, but sometimes accompanies that of the scrotum, and is characterized by a thickening and corrugation of the skin, which is chapped, and often so much contracted as to produce phymosis. The slightest attempt to draw back the prepuce causes considerable pain, and frequently an oozing of blood from the parts. It is a tedious and painful affection.

4. *Psoriasis scrotalis*, and that of the pudendum in females, are of very rare occurrence, for which cases of chronic eczema have been often mistaken. However, P. diffusa may some-

times appear on these parts, when the skin is dry, rough, thick, and furrowed, and the penis is sometimes surrounded with a scaly envelope: syphilitic tubercles developed in these regions have often been mistaken for spots of P. guttata.

5. *Psoriasis palmaria,* commonly called *grocers' and bakers' itch,* commences with slight inflammation, followed by the development of red, firm, hard spots in the palms of the hands, sometimes attended with burning and smarting. It more rarely appears on the soles of the feet. The raised spots are soon covered with a dry white scale, which is replaced as soon as it falls off, and according as the centre heals, the circumference increases until the whole hand is affected. The centre is of a livid color when denuded, the skin is thickened, furrowed, and chapped; the fingers, the palmar aspect of which is also affected, cannot be fully extended without exciting considerable pain. In females this affection is often complicated with psoriasis of the pudendum. It is difficult to be cured, and is the more liable to return from the fact that those accustomed to manual labor are most subject to it, and such persons are always anxious to resume their occupation as soon as they are cured.

6. *Psoriasis dorsalis* is sometimes confined exclusively to the dorsal aspect of the hands and fingers. The squamous patches are harder, drier, and larger than those of the foregoing, and there are deep and painful fissures in the neighborhood of the articulations. This variety is also called grocers' or bakers' itch, and affects the same class of persons as P. palmaria. Washerwomen are also very subject to it, evidently from the constant irritation produced by the soap. It is occasionally met with in the better classes of society.

7. *Psoriasis unguinum.* This variety was first described by M. Biett in his lectures; it frequently coexists with other forms of the disease, especially with P. guttata. The disease affects the matrices of the nails, the secretion of which becomes altered, and the nails are misshapen, rough, uneven, and laminated. This complication is not peculiar to psoriasis; it frequently accompanies lichen, which, when seated on the fingers, manifests itself by frequent eruptions, and penetrates to the roots of the nails.

Causes.—The causes of psoriasis are as obscure as those of lepra. It is sometimes hereditary, but never contagious: both sexes are liable to it, and adults more frequently than young persons. It occurs more frequently in spring and autumn than at any other period. It sometimes occurs in healthy persons who are both well-fed and clothed. It often follows the abuse of spiced food and of spirituous liquors, the use of sea-fish, violent mental emotions, and irritating local applica-

tion. It sometimes alternates with other diseases, and we have seen it succeed to articular rheumatism.*

Diagnosis.—Psoriasis may always be distinguished from *lepra*, by bearing in mind the following facts: in the latter the patches are broad, round, depressed at the centre, and raised at the circumference. In *P. guttata*, the variety most likely to be confounded with lepra, the patches are small, and their centre is raised. In *P. diffusa* they are irregularly quadrangular, rough, and uneven; and in *P. inveterata* the patches are large and furrowed, and envelope the whole limb. It is unnecessary to make any remarks on the peculiar characteristics of *P. gyrata*. The rounded patches of *lichen circumscriptus* may sometimes be mistaken for psoriasis; but it will be always easy to discover the central papulæ of lichen in or about the eruption. M. Biett did not coincide with Willan, as to the conversion of lichen into psoriasis diffusa; he admits, however, that patches of lichen may be covered with scales; but adds, that the papulæ are always to be distinguished with the slightest attention, and that the scales are only accidental.

One of the commonest forms of the *syphilitic* eruption may be confounded with psoriasis guttata; as for instance, when syphilis appears on the skin in the form of round, isolated, prominent patches; but in psoriasis they are covered with scales, and of a bright red color, whilst in *syphilis* they are of a coppery color; they are seldom covered with true scales, but in their stead with a sort of thin, slight crust. M. Biett has often pointed out in his lectures a peculiar and pathognomonic character—a small white border, analogous to that which succeeds a vesicle, surrounding the base of each elevation. Sometimes the debris of *syphilitic squamous* patches, and especially of *syphilitic tubercles* during the process of cure, have been mistaken for P. gyrata. But here, as in the foregoing cases, the coppery tint and other concomitant symptoms, independent of the respective characters of each affection, will be sufficient to prevent this mistake from occurring.

The latter variety has also been confounded with certain forms of lepra, but the distinction is so evident, that we shall not dwell on it here. The thickness of the scales, and the presence of hard, firm, projecting spots, will prevent that form

* The connexion between both lepra and psoriasis and derangement of the digestive apparatus, in some one or more of its functions, is not so much insisted upon by the French writers as its influence in a practical point of view deserves. English authors generally take this view. Prout (*on Stomach and Renal Diseases*) and Holland (*Medical Notes*) both speak of their intimate connexion with the gouty diathesis. H. D. B.

of psoriasis which appears on the scalp from being confounded with *pityriasis*. It is sometimes more difficult to be distinguished from *chronic eczema*. However, in the latter affection, the scales are yellow, and the surface beneath humid, besides there are always some elementary vesicles to be seen round the parts. Psoriasis of the lips still more resembles *eczema*, as it presents the same kind of chaps or fissures; but the absence of vesicles, the large size and hardness of the scales, and the thickness of the epithelium, are diagnostic of the former. Several of the squamous diseases may exist simultaneously. This disease may also be accompanied with eruptions of a different order, as, for instance, porrigo favosa; but such complications are rare.

Prognosis.—Psoriasis is, generally speaking, a severe affection, especially on account of its rebellious nature, and long duration. The prognosis will vary according to the age of the eruption and condition of the patient. For example, *P. guttata*, although not a severe form of the disease, is nevertheless very obstinate: *P. diffusa* still more so, especially when it attacks old people, or persons of a debilitated or broken-down constitution. *P. inveterata*, the severest form, sometimes resists every kind of treatment.

Termination.—Psoriasis may sometimes disappear without the aid of any treatment. The patches dwindle and fade, and the skin resumes its natural color. In other cases, one variety passes into another; thus P. guttata and diffusa are changed into the inveterate form. Sometimes it disappears on the accidental appearance of some other disease, as intermittent fever, erysipelas, measles. It rarely terminates fatally, unless when it attacks persons far advanced in years. In the majority of cases it may be cured by the application of appropriate measures. The patches gradually decline, the skin becomes more pliant, and by degrees resumes its natural color and condition. In some severe cases, it resists every kind of treatment. The skin increases more and more in thickness, and its natural condition is altered; even the nails participate, as already mentioned, in the general tegumentary lesion. The disease may continue in this manner for years without exciting any dangerous complication; but the patient sometimes sinks under chronic inflammation of the mucous membrane of the stomach and bowels.

Treatment.—The treatment of psoriasis is essentially the same as that of lepra, and the curative indications of the latter disease are also applicable to psoriasis; but as psoriasis is often more rebellious than lepra, the remedial agents, especially the preparations of arsenic, should be pushed further, and with more energy, than the latter affection requires. Those

who have had experience in the treatment of this disease, know how little value is to be attached to the use of mere topical remedies, and narcotics and emollients. We do not hesitate to say, that a permanent cure, unattended with any dangerous results, may be obtained by the judicious administration of the arsenical preparations, which are indeed the only effectual remedies for P. inveterata. We say this after long experience in the treatment of these diseases; and M. Biett entertained a similar opinion for the last twenty years. We have published a case of psoriasis inveterata of fifteen years' standing, which was cured at the Hospital of St. Louis in twenty-six days, with Fowler's solution, without occasioning the slightest accident. (Vide *Journal Hebdom.* vol. i. p. 259.) Another preparation of arsenic—the Asiatic pill—is also very serviceable in the severe forms of psoriasis. R. *Arsenici protoxidi, gr. i.; Pip. Nig. gr. xij.; Pulv. Acac. gr. ij.; Aq. distill. q. s.; Divide in pil. xij. vel xvj.*—One of these pills to be given daily, sometimes two, but never more; their continuance to depend upon the state of the eruption and of the patient.. If no perceptible improvement takes place within fifteen or twenty days, they should be discontinued; but if their effect is favorable, they may be given for six weeks, with occasional suspensions, and with the same caution as is necessary in the use of the other preparations of arsenic. M. Biett has obtained successful results with the arsenite of ammonia, administered in the same doses as Pearson's solution. The ointments of the proto-iodide and proto-nitrate of mercury, are useful in stimulating the skin into more healthy action, when the patches are obstinate. When more active applications are required, the deuto-iodide of mercury, tartar emetic ointment, or blisters, may be resorted to. In adopting Ambrose Parè's plan of vesication, it will be necessary to apply the blisters eight or ten times successively, to have any good effect.*

* In some cases of acute and sub-acute psoriasis, especially of *P. diffusa*, liquor potassæ, given as recommended under the head of eczema, will be found very beneficial after the secretions from the bowels have been properly regulated. As the case becomes more chronic, Plummer's pill may also be given at night, or a mercurial laxative exhibited two or three times a week. The diet must also be strictly attended to, avoiding salt or smoked meats, fish, pastry, gravy, and all kinds of stimulating food and drinks, and also all articles known to cause acidity of the stomach. In chronic cases it is often necessary to change the habits of the patient entirely. Sometimes even a change of climate is necessary to accomplish a cure.

In chronic cases, the bichloride of mercury will sometimes succeed when other means have failed. It may be given in fluid extract or syrup of sarsaparilla, or in some bitter tincture, and in doses varying from an eighth to a quarter of a grain, three times a day. I have found this particularly useful in *P. palmaris*.

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External applications are sometimes useful, and must be adapted to the stage of the eruption, and particularly to the irritability of the skin. Some of those in most common use have already been mentioned under the head of lepra. Oily applications seem, as a general rule, much the best adapted to squamous affections, and the mildest are often the most grateful as well as the most efficacious. Among these the cocoanut oil, or butter of cocoa (*ol. palm. cocc.*), has been recommended highly, and has the advantage of never becoming rancid. Fresh butter and spermaceti cerate may also be used. Oiled silk, however, is one of the best applications in this as well as in some other forms of cutaneous disease, and often succeeds alone better than any ointment, but may also be used with advantage at the same time that other applications are made.

When there is great thickening both of the cuticle and cutis, particularly about the knees and elbows, Dr. Cumin (*Cycl. Prac. Med.*) recommends very highly the application of strong acetic acid. If there are excoriations or fissures, they must be protected by some mild cerate. H. D. B.

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thin lamellæ. The slightest movement produces an abundant furfuraceous desquamation. This exfoliation seems composed of small portions of cuticle, like molecules of meal, especially on the chin, and on passing the hand over it falls off freely, and is instantly reproduced. The scales are sometimes larger on the scalp, where they resemble a split pea or lentil, but more flattened.

Causes.—The causes of pityriasis are not easily ascertained. Its development is often accompanied by an inactive condition of the bulbs of the hair. It appears in the infant, in whom the hair has not yet grown, and in old people, when it has fallen off. It is often produced on the chin by the irritation of the razor. The irritation produced by constant combing with a fine-tooth comb also excites the disease.

Diagnosis.—The large size and prominence of the patches of *psoriasis*, the peculiar shape of those of *lepra*, and the characteristic *farinaceous* desquamation of pityriasis, will prevent these diseases being confounded together. The cuticular desquamation which takes place in the *exanthematous affections*, is very different from that of pityriasis, besides that the previous symptoms would soon remove any doubt in the case; and when it occurs in *chronic eczema*, there are always some elementary vesicles to be seen in the vicinity of the diseased parts; besides, the small scales are not incessantly renewed, as in the former affection; the presence of papules, and the thickening of the skin in *lichen*, and the difference in the kind of the exfoliation, will distinguish the disease. The peculiar color of the *ephelides*, and also the size and singular shape of the patches, will distinguish it at once from pityriasis; and a variety of *ichthyosis*, which is sometimes mistaken for the latter disease, may be distinguished by the profound alteration of the skin, its rough, thickened appearance, and the dirty gray color of the scales; while in pityriasis the skin is rather softened than thickened, and the scales are white. One is also almost always congenital, while the other is always accidental. Pityriasis capitis can hardly be confounded with *porrigo*. The yellow or favous pustules, so characteristic of the latter affection, are sufficient to distinguish it at a glance.

Prognosis.—Pityriasis capitis is in general a slight affection. It may co-exist occasionally with other chronic inflammations. Its duration is often very protracted.

Treatment.—The only treatment required, are some bitter infusions, to which may be added one or two drachms of the sulphate of soda, or subcarbonate of potass, to the pint, and alkaline lotions to the parts affected; sometimes alkaline

baths, or the vapor douche. In infants and children, brushing the head with a soft brush, and cleanliness, are the only measures required. The irritation of the brush excites new action in the parts, and the exfoliation soon ceases: a fine-tooth comb should not be used. When the disease is seated on the chin in adults, the beard ought to be cut with a pair of scissors, instead of a razor.*

2. *Pityriasis rubra* is characterized by the appearance of slight red patches, or spots, the size of a split pea, which soon coalesce, and extend gradually, so as to form large, continuous, red surfaces, covered with a multitude of minute scales, which fall off, and are reproduced continually. The surface is generally hard, but is sometimes soft to the touch, which depends on a kind of oily exudation which it gives out. It appears to occur frequently from the action of heat, the rays of the sun, and especially from acute moral affections. The shape, elevation, thickness, and extent of the scales of lepra and psoriasis, distinguish these diseases from pityriasis rubra. Its red or rosy hue distinguishes it from the pale yellow color of P. versicolor. If the patient is young and vigorous, venesection may be employed, but if old and feeble, mild tonics should be administered; and alkaline lotions, together with simple, vapor, or sulphureous baths, are the external agents from which most benefit will be derived.

3. *Pityriasis versicolor* manifests itself in the form of continuous patches, of various size, covered with a continual furfuraceous desquamation. It is distinguished by the variegated yellow discoloration of the cuticle, which continues for a considerable period after the cure of the disease. It appears chiefly on the neck, abdomen, chest, and sometimes on the face. It often arises from exposure to the sun in warm climates, from the ingestion of acrid food, spices, &c. It is distinguished from the ephelides by the furfuraceous desquamation, and from all other affections of the skin, by the peculiar pale yellow discoloration of the cuticle. It is a slight, but usually a very obstinate eruption, and requires the same

* P. *Capitis* is sometimes a troublesome and obstinate affection, being accompanied by great heat, tension, and a severe itching of the scalp; and, in addition to an abundant desquamation, an oozing out of a serous, tenacious fluid, which unites the hair and epidermic secretion together. This sometimes extends over a large portion of the scalp. In these cases, after the removal of the incrustations by emollient poultices, alkaline washes and stimulant and astringent lotions and ointments may be used, of degrees of strength proportioned to the irritability of the scalp in particular cases. The creasote ointment, in such cases, is often useful. It also sometimes appears in well defined patches, without any fluid secretion, and lasts for months and years, and is very liable to return. In all cases of long continuance of this disease, the general health requires attention. H. D

remedial measures as the foregoing variety, especially sulphur baths and lotions.*

4. *Pityriasis nigra.*—Numerous examples of this variety were observed in Paris in 1828-9. The furfuraceous desquamation occurred on a black surface, sometimes of a deep shade. The disease appeared in two distinct forms. In the one, the epidermis was the seat of the coloration; and if detached, a red surface appeared beneath. In the other, the epidermis was transparent, and the cutis vera was the part discolored. The treatment of the other varieties will also answer in this form of the disease.†

ICHTHYOSIS.

SYN.—*Fish-skin disease.*

Ichthyosis differs in many points from the rest of the squamous diseases. It is not merely the result of an accidental alteration and thickening of the epidermic lamellæ. It is evidently a profound and special organic lesion of the whole cutaneous tissue; but as it would be difficult, in the present state of science, to indicate precisely the class of cutaneous eruptions to which it really belongs, we shall be content for the present to describe it, as Willan and Bateman have done, amongst the scaly diseases.‡

Ichthyosis is characterized by the development upon one

* P. *versicolor* is very apt to be mistaken for a syphilitic affection, but there is no cutaneous disease produced by that virus which commences with small elevations covered with minute scales, which enlarge and soon coalesce, so as to form large patches on the chest, abdomen and arms, which are accompanied by itching, and covered by a branny exfoliation, as is the case with *p. versicolor*. *Syphilitic spots* are usually but few in number, are nearly or quite circular, do not run together and form large patches, are not confined to the chest, abdomen and arms, are of a darker and coppery hue, are unaccompanied by itching, and without exfoliation.

Mr. Acton says, in speaking of the diagnosis of P. versicolor from a syphilitic eruption (*London Lancet*, Amer. Rep., Nov. 1847), "in my own practice, I have always placed the greatest dependence upon the absence of condylomata, psoriasis palmaris, and sore throat; when these are absent, and the patient in good health, you may be sure that you have to treat a simple case of pityriasis versicolor, a complaint which is very harmless." H. D. B.

† Rayer describes Pityriasis under the head of *general* and *local*, the former of which corresponds with the P. *rubra* of our authors. P. *versicolor* and P. *nigra* he places under the head of morbid alterations of the color of the skin, the former under the name of *chloasma* and the latter under that of *melasma*. H. D. B.

[‡ Surely this disease is misnamed as well as misplaced. There is nothing *scaly* about it. The name, *warty* disease, would be much more appropriate than that of Fish-skin. It is true, the cuticular appendages are not organized, like true warts, and do not bleed on being removed; but otherwise their physical characters have a much greater affinity to those of warts than to the scales of a fish. B.]

or more parts of the tegumentary envelope, and most frequently over the whole body, of thick, hard, dry, imbricated scales, of a dirty grey color, resting upon a perfectly uninflamed surface, and never accompanied by pain, heat, or itching. Although this disease may appear on every part of the body, it is met with less frequently on the palms of the hands, soles of the feet, internal aspect of the limbs, groins, armpits, face, and particularly the eyelids, than on the other regions; even when the disease is almost general, these parts remain intact, or else become very slowly, and at intervals, affected.

A case of this kind was under our care at the Hospital of St. Louis for some time: a boy, twelve years of age, was suffering from ichthyosis, which had spread over every part of the body except the face; but, singular to relate, whenever the slightest irritation of the gastro-intestinal mucous membrane occurred, the patient's face assumed first a dirty color, it then became covered with small, dry, greyish scales with a slight thickening of the skin. These scales were much thinner than those of the rest of the body, which, on the other hand, were broad, hard, and blackish, imparting to the face a peculiar aspect, like that of an old man. According as the internal irritation subsided, the scales fell off. The face gradually resumed its natural appearance, and nothing remained after the disappearance of the eruption but a slight thickening of the skin. The scales on the other parts of the body did not present anything peculiar. The boy's health was very good, but the mucous membranes were extremely susceptible of the slightest excitation.

Ichthyosis appears principally on the external aspects of the limbs, round the joints, on the knee and elbow, on the upper part of the back, and on those regions where the skin is naturally thick and coarse. It is most usually general; but is sometimes limited to a particular part, especially when it is accidental, sometimes affecting the arms or the legs only. It is generally a congenital disease, and lasts during life. Even when it is developed accidentally, it may be prolonged for an indefinite period. In some instances, however, it m
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small, greyish, slightly resistant epidermic lamellæ, accompanied with a continual furfuraceous exfoliation. According to some writers, this variety chiefly attacks old people, but it appears to us that they have mistaken some other affection, having some analogy with it, for ichthyosis.

It often appears, however, in a much more severe form than the foregoing, and becomes much more distinct according as the patient grows older. The skin is thick, furrowed, and covered with genuine scales, which are dry, hard, resistant, greyish, and sometimes pearl-colored, often very glossy, and surrounded several times with a kind of blackish circle. These scales are formed by thickened cuticle, furrowed all over, divided into small irregular-shaped portions, of different sizes, which are free at one extremity and slightly imbricated at the point of attachment to the skin. Some of them are small, and surrounded with a multitude of small farinaceous points, which correspond to the furrows of the epidermis. Others are larger, and are much diffused over the wrinkled surface. These scales may be removed with impunity, and without occasioning the slightest pain, with the exception of the larger ones, which are more deeply and firmly attached to the skin. None of these scales leave the slightest redness after them when they disappear. But the skin is so rough, that on passing the hand over it, it conveys the sensation of the surface of a file, or even of the backs of certain fishes. The scales are thicker and more apparent on the limbs, the front of the patella, the elbow, the external surfaces of the arms and legs, than elsewhere.

However so much extended this scaly eruption may be, and whatever alteration it may produce in the tegumentary envelope, it never occasions any serious derangement of the functions of organic life. There is no pain or itching; the skin, however, is no longer able to perform its transpiratory functions, unless at certain points, as for example, by the soles of the feet, which are generally free from scales even when the disease is diffused over the whole body, and are always moistened with copious perspiration. Congenital ichthyosis seldom undergoes any modification. However, in some rare instances, and at certain periods, it subsides for a time, under the influence of internal organic inflammation, but it reappears at the following season with all its former characters and symptoms. We have seen a case of this disease complicated with a papular eruption in a young child, neither of which seemed to interfere with the other.

Autopsy.—Post-mortem examinations of persons who have died with ichthyosis, have not revealed any pathological con-

dition evidently depending on that disease. The skin, however, appears to be deeply altered in structure, and its whole thickness is involved in the morbid thickening and formation of the scales.

Causes.—Ichthyosis may be congenital or accidental. When congenital, it is generally hereditary. In other instances it seems to be the result of fright, or some other acute moral affection on the part of the mother. When it is accidental, and especially when it is partial, it depends on external causes. It is endemic in some climates, and frequently appears in towns along the sea coast, evidently caused by the ingestion of putrid fish, stagnant water, and by the constant dampness and moisture of these districts. However, it has been known to occur under circumstances directly opposed to these, and even from intense grief, fear, or rage. The fundamental causes of this affection are, however, still involved in much obscurity. It may appear in either sex, but in men much more commonly than in women, in the proportion of nineteen out of twenty cases, according to the experience of M. Biett at St. Louis Hospital.

Diagnosis.—When this disease is well marked, it cannot be mistaken for any other cutaneous affection, but when it is partial and superficial, and the scales are thin and small, the cuticular exfoliation which supervenes resembles the desquamation which succeeds *eczema* and *lichen;* but the origin of the disease, the absence of vesicles and papulæ, and the peculiar character of its own eruption, will at once distinguish it from these affections.

Prognosis.—Congenital ichthyosis is an incurable disease. The prognosis is not, however, very unfavorable, as the patient continues to enjoy pretty good health, and no internal disease ever supervenes as a consequence of ichthyosis. The accidental form is ever rebellious, and may continue during life.

Treatment.—It is evident from the history and causation of this disease, that the only remedial measures that are at all likely to give relief, are palliatives and external applications; mucilaginous lotions and vapor baths, for example, seem to have the effect of modifying the roughness, by altering the condition of the skin. Dr. Willan has recommended the internal use of arsenic, the effect of restoring the skin to its natural state; but I have not found this remedy at all so efficacious in practice. In addition at the Hospital of St. Louis. The best remedies, in the slightest use are those above mentioned, although in some rare instances have found

partial and accidental.* [The iodide of arsenic administered internally, and the vapor of sulphur and iodine applied to the diseased surfaces as directed under the head of lepra, might be attended with benefit.]†

It is unnecessary in a manual of this kind to enter into an account of the different varieties of ichthyosis, which are merely interesting and curious deviations from the common form of that disease, the history of which would be attended with no practical utility.

[A case of congenital ichthyosis was recently exhibited at the different Medical Societies of London. The patient, Thomas Jones, appeared to be otherwise a healthy boy, of a fair complexion. He was a native of Wales, eleven years of age, and the youngest but one of a family of ten children. None of the rest of the family were affected with the disease, and the mother attributed the cause in this instance to a severe fright which she received during the last months of pregnancy. The disease was extensively diffused over the skin. It was more strongly marked on the lower extremities than on any other part, and the morbid product was in some places nearly half an inch in length. The skin on the palms of the hands, on the face, the neck, the upper regions of the chest and back, was perfectly free and remarkably fair and healthy looking. Although the soles of the feet were, at that time, free from the disease, the dark discoloration of the skin of these parts indicated the previous existence of the morbid appendages. The disease first made its appearance about five or six weeks after birth; it proceeded slowly and gradually until it at length became diffused over the body. It never interfered with the boy's general health, which has been always excellent. The eruption, if I may so call it, is shed at intervals of variable extent, and soon grows again. The scaly appendages fall freely during the night, from the heat of the bed and the friction of the body against the bedclothes, and the disease may be seen in various stages on different

* In their last edition, our authors omit all the passages which describe an *accidental* as distinct from a *congenital* form of ichthyosis, in every part of the article on this disease, not using the word *accidental* at all. H. D. B.

† Mr. Clay, of Manchester, gives an account (*Lond. Lancet, July*, 1841) of a boy, four years old, who had suffered from the disease three years, and who was cured by the application, over the whole surface night and morning, of an ointment of sub-carbonate of potash, ℥ iij to ℥ viij of lard. He afterwards took an infusion of gentian and sub. carb. pot., and was sent to the seaside.

In one case under my care, the disease was sensibly improved by baths of carbonate of soda, ℥ iv to a bath, during the few weeks the patient continued their use. The liquor Donovani was given in moderate doses at the same time.

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parts of the skin. The cuticular appendages are perfectly unorganized; they emit a disagreeable smell, similar to that of mice, and when ignited, give out a strong odor of burning feathers or horn. Cows are occasionally affected with a disease somewhat similar to ichthyosis.—B.]

TUBERCULA.

The diseases which have been classed under this order, are characterized by small, primary, circumscribed, solid tumors of various sizes, formed in the substance of the skin, and very different from those indurations which succeed some of the pustular diseases. These small tumors constitute a peculiar elementary lesion, to which the name of *tubercle* has been applied by dermatologists, and they generally terminate in suppuration or in ulceration of a rebellious character. The essentially tubercular diseases but seldom occur in European countries; indeed they appear to be peculiar to the tropics.

We propose to describe in this order, only three of the numerous diseases arranged by Willan and Bateman amongst the tubercula—these are *Elephantiasis Græcorum*, *Frambœsia*, and *Molluscum*—as we consider that several of the affections mentioned by those writers belong, properly speaking, to the province of the surgeon, and the others have been more appropriately arranged and treated of elsewhere.

Tubercular diseases are essentially chronic in their nature; they are slowly and gradually developed, and continue for months and even for years.

Symptoms.—The tubercles are red in *frambœsia;* they are reddish, sometimes the color of the surrounding skin, in *molluscum;* and of a dark livid tint in *elephantiasis.* Their size is very variable; in some cases they are not larger than a pea, in others they are as large as an egg. They are generally distinct and isolated; sometimes, however, they are set close together, and collected in groups, as for example in frambœsia. These diseases are rarely accompanied by general febrile symptoms, with the exception of elephantiasis, which is frequently complicated with chronic inflammation of the mucous membranes of the stomach and bowels. The eruption is commonly confined within a limited compass. It is, however, sometimes general. It may remain stationary for a certain period, or terminate by resolution, or else the tubercles may suppurate at their summits, when they become covered with scabs of variable thickness. After a time these scabs are de-

tached, and expose unhealthy looking sores. In other instances, they are merely slight excoriations, whence oozes a kind of serous exudation, which terminates in dry, thin, and very adherent incrustations.

Causes.—The causes of the tubercular diseases are involved in obscurity. They are of exceedingly rare occurrence in these countries, but are common enough in the tropics. Frambœsia and one of the varieties of molluscum are contagious.

Diagnosis.—The tubercular eruptions are characterized by symptoms and appearances so peculiar, that they are not only easily distinguished from all other cutaneous diseases, but one of them can never be mistaken for another of the same order. The small, solid, circumscribed and enduring tumors above mentioned are peculiar to this class of diseases. There is, it is true, a variety of syphilis characterized by the presence of tubercles; nevertheless, there are striking differences between these affections—in the form and color of the eruption, the progress of the tubercles, and the character of the symptoms.

Prognosis.—The tubercula are in general severe diseases, principally owing to their long duration and rebellious nature. Elephantiasis Græcorum is in particular a formidable affection. It soon exerts its destructive influence upon the system, and is generally complicated with diseases as rebellious as itself. It resists every method of treatment, and finally terminates in death.

Treatment.—As these diseases rarely occur in France, and as they have been but little investigated in the countries to which they are peculiar, we cannot be expected to know much respecting their treatment. The rebellious character of Elephantiasis Græcorum, which is better understood than any of the other eruptions of this order, depends, perhaps, in a great measure on the fact that the physician rarely sees the disease until it is already far advanced.

ELEPHANTIASIS GRÆCORUM.

SYN.—*Tsaraith of the Hebrews; Lepra Arabum; Lepra Hebræorum; Lepra tuberculosa; Lentiasis; Satyriasis; Elephantiasis tuberculata and anæsthetica; Lepre elephantiasis; Morphée of Brazil; Radesyge of Norway; Ma-fung of the Chinese.*

Elephantiasis Græcorum, or *tsaraith* of the Hebrews, is most frequently characterized by the appearance of patches of a yellowish or dark color, with acute and very often loss of sensibility, which spots are succeeded by elevated tumors,

irregular both in shape and size, of a fawn or purplish color, soft and smooth to the touch, and which may, at a later period, become the seat of unhealthy ulceration. Such ulcerations may also exist at the same time with the tubercles in the same patient, or may occur alone, without having been preceded by tubercles. This disease, fortunately unknown in temperate climates, may still be carried to them from other regions, and is at the same time both the oldest and the most terrible of diseases of which we have any record.

The Greeks gave it also the name of *leontiasis*, on account of the great deformity produced by it when its large irregularly shaped tubercles covered the nose, lips, and forehead, and, together with the yellowish color and oily aspect of the patient, gave the face the appearance of that of a lion.

As tubercles are not always found in this disease, and as the word *tubercle* is used to describe a special pathological product, we propose to designate Elephantiasis Græcorum by the word *tsarâth*, making two species, *tsarâth phymatodes* and *tsarâth aphymatodes*, according as it is tubercular or not tubercular (φυμα, tubercle; α privative); these species to be subdivided into *anæsthetic* and *hyperæsthetic*, according as there is increase or loss of sensibility, the last state being the rule, and the first the exception.

We shall describe the disease from the details furnished by Drs. Robinson and Winterbottom respecting it in Africa, by Larry as it occurred in Egypt, by Ainslie in Hindostan, by Adams at the Island of Madeira, by Dr. Fabre in Brazil, Dr. Skene in New Brunswick, and Dr. Danielssen in Norway, comparing their observations with what we have ourselves seen.

Causes.—The effect of climate on the development of tsarâth or Elephantiasis Græcorum is most marked. It is not met with at the present time in temperate regions, but there is a disposition to it as you approach the equator on the one hand, aud the poles on the other. It is found on the coast of Norway from 60° to 70° of latitude. It does not exist in Europe between the 40° and 55° of north latitude; but this is not true with regard to Asia and America. It is said to have been of very frequent occurrence in France, England, Ireland, Italy, and Germany, during the middle ages, and to have been carried to those countries from the East by means of the crusades. But, doubtless, many other diseases of an entirely different nature were confounded together during that period.*

* Tubercular leprosy is said also to be of very common occurrence in China and to be very prevalent at Canton.

For an account of the disease in New Brunswick, see essay by Dr. Robert Bayard, London Lancet (Am. Rep.) Jan. and Feb., 1850. H. D. B.

All ages and both sexes are liable to it; but it appears to attack males in a larger proportion than females, to appear more frequently before puberty, and to affect more especially those of the bilious temperament. It has been seen in the new-born infant, but rarely, if ever, commences after the age of forty years.

Elephantiasis Græcorum is admitted by all to be hereditary, but it often passes over one generation and appears in young children. Its contagion is not admitted at the present day. The opinion that it has any connexion with syphilis has been for a long time abandoned.

Insufficient nourishment, the use of indigestible food, the prolonged and exclusive use of salted food, and of smoked and dried fish, have great influence in developing it in the countries where it prevails. The use of pork is also said to have a similar effect upon the strangers and upon natives. To the above causes may be added, neglect of cleanliness, residences in low and damp places, the neighborhood of marshes, exposure to weather, great fatigue, venereal excesses, and abuse of alcoholic liquors.

Invasion.—Elephantiasis Græcorum sometimes shows itself without any particular alteration in the health, and without any immediately appreciable cause; but, in other cases, its appearance is preceded by general symptoms, more or less marked, as languor, remarkable depression of spirits, and a decided febrile state. Occasionally, its development is preceded by deterioration of the general health for several years.

The *tubercular* form of the disease commences with the appearance of spots, which are usually of a fawn, but at other times of a yellowish or dark red color. Sometimes tubercles of these different colors appear at the same time on the same person.

The face, forearms, and the external surface of the legs, are most frequently the seat of the first appearance of these spots. In some cases the spots, and afterwards the tubercles, are confined to particular parts, as the nose and the ears, when they are accompanied by a peculiar swelling of the cellular tissue. The disease comes on so insidiously at times, and in the midst of such apparent health, that the spots would cause no anxiety, if it were not for the insensibility of the skin at these points. This insensibility is not constant; but there may be such an increase of the sensibility, not only of the spots themselves and of the tubercles, but of other parts, and especially of the hands and feet, that the touch will cause a sensation like that produced when the elbow is struck, or by a smart electric shock.

Usually there are other symptoms indicating serious lesion of the spinal nerves, such as general prostration, debility, muscular cramps in different parts of the body, and diminution, rarely increase, of the venereal appetite. The skin becomes dry, while the sebaceous secretion seems to be increased, and an oily matter is spread on the surface, which is most apparent on the face. All these symptoms increase with the increase of the disease, the tendency of which is to extend itself and attack other parts. The spots may remain stationary for a variable time, from a few weeks to a year or more.

Progress.—Usually the number of the spots gradually increases, they increase in size and in elevation, and soon losing their smooth and even surfaces, become rough and uneven. When seated on the face, a swelling of the cellular tissue of the nose, forehead, eyes, chin, cheeks, and especially the ears, accompanies the development of the tubercles on these parts, giving rise to fawn-colored or livid tumors, soft to the touch, which produce great deformity, and may reach a large size.

When these tubercles are seated only on the lower limbs, they frequently occupy the lower part of the thigh, or the parts about the external malleolus, in which latter case there is frequently œdematous swelling.

These tumors sometimes become confluent from larger groups, and at other times they remain isolated. Their size varies from that of a small pea to that of a hen's egg. They can be raised and taken, as it were, between the fingers, and may be bent or cut off even with the skin without causing the least pain.

When the face is attacked, the mucous membranes of the nose, mouth, pharynx, and eyes, rarely remain a long time unaffected. The voice begins to be hoarse, the respiration becomes more frequent and more labored, at the same time that the color of the tubercles becomes more livid, and the smell of the breath peculiarly offensive. The eye is attacked and vision destroyed, the hair falls from every part of the body, the testicles become atrophied, and the nails white and brittle. When the patient has reached this stage, the deformity is great, and the unfortunate sufferer an object of disgust, which is still more increased by the excessive fœtor of the breath, and of the discharge from the nostrils.

The second period, or the tubercular, which succeeds the spots, may continue months, and even years, with ulceration or suppuration of the tumors. Death may even take place before ulceration occurs. Those which ulcerate are gradu-

ally covered by a blackish scab, leaving, when it falls off, fungous and ill-conditioned ulcers, which are bathed by a fetid sanious pus, the concretion of which forms still thicker scabs at the same time that the ulceration goes on increasing in depth, and denudes the muscles after destroying the skin. When resolution of the tubercles takes place, a depression follows, and their former seat is marked by a change in the color of the skin.

The ulcerations usually destroy the subjacent tissues, thus mutilating the nose, and destroying the septum and palatine arch. On the extremities, the ulcers extend in depth, and may cause death by becoming gangrenous, and the patient may thus witness the slow destruction of his limbs, and sometimes one finger after another is gradually removed.

The general symptoms are those principally of lesions of motion, and derangement of the digestive functions; there is sometimes alternately constipation and diarrhœa, and often a voracious appetite. The circulation is slow, and is sometimes hardly felt at the extremities.

Tsarâth aphymatodes, or the *non-tubercular* form of Elephantiasis Græcorum, is characterized by the appearance of spots, also livid or fawn color, but which, instead of being succeeded by hard, elevated tumors, become covered with bullæ or vesicles, and sometimes with pustules; and, in some cases, there is atrophy of the dermis, and ulceration destroying in depth. The bullæ are sometimes isolated and at other times grouped, and vary in size. They open after a certain time, and are succeeded by ulceration. They appear first, according to Dr. Fabre, principally on the hands, arms, feet, and legs, and afterwards on the back towards the shoulders, and on the thighs about the trochanters. The pustules are also followed by ulceration of the parts, and when on the extremities, almost always destroy the phalanges.

This variety may co-exist with the tubercular form, or may be developed alone. The insensibility of the skin is most frequently preceded by a remarkable state of hyperæsthesia; and, according to Dr. Danielssen, this increase of sensibility often precedes the eruption on the hands and feet, and may continue for years; but it gradually diminishes, and anæsthesia soon commences, at the same time that all secretion ceases on these points. The skin in these places undergoes a kind of atrophy; it becomes pale, dry, and hard like parchment, and loses all its elasticity. The want of sensibility gradually extends over the rest of the surface. The mucous membrane of the nasal fossæ afterwards becomes

affected, and the septum is destroyed by ulceration. Necrosis attacks the phalangal bones gradually in succession, and after several weeks or months of suppuration one or more of them is thrown off, and the ulcer heals with shortening of the finger. All the toes and fingers may thus be destroyed alternately and gradually, and the extremities slowly removed.

The non-tubercular variety of Elephantiasis Græcorum is much more rare than the tubercular variety, even in those countries where it most prevails. According to Dr. Fabre, their relative frequency is in the proportion of one to twenty.

Death in the non-tubercular variety is sometimes owing to a cutaneous complication, but more frequently to internal lesions either abdominal, thoracic, or, what is more rare, cerebral. Colliquative, diarrhœa, and discharges of blood, in consequence of intestinal ulceration, are the most frequent causes of the fatal termination in the abdominal affections, and tubercular phthisis and chronic forms of inflammation of the lungs in the thoracic cases. Death is sometimes hastened by obstructions of the glottis and larynx, causing suffocation. Among the cerebral lesions, apoplexy is not rare, but those forms of mental derangement are not met with in this disease which occur so frequently in pellagra.

Complications.—The tubercular form of Elephantiasis Græcorum may be accompanied or complicated by Elephantiasis Arabum. It may also be complicated by tubercles in the lungs, or in the mesentery, and may appear as a sequel of other affections.

Duration.—The duration of both forms of the disease is usually from seven to fifteen years, but it may last thirty or forty years. It may sometimes disappear spontaneously, or as the effect of remedies; but almost always reappears, and in a more grave form.

Post-mortem appearances.—These are various, and depend on the duration and intensity of the disease. The integuments, as we have already mentioned, are studded with tubercles of various sizes; some appear to occupy the tissue of the true skin; others seem to be the effect of repeated attacks of inflammation in the laminated tissue underneath the dermis, producing whitish firm indurations. The skin which covers them is commonly thin and shrivelled. The skin of a patient whose case is detailed by M. Fabre was macerated for several days, and presented, first, a thickened state of the epidermis; second, beneath this a very vascular layer,

similar to erectile tissue; third, another layer of hard, thick, and dark tissue, with several cavities, containing pale yellow or white masses, and, below all, thickened adipose tissue.

The mucous membrane is mostly of a bronze color; sometimes there is a diminution of the color; the tubercles are effaced, and there is no hypertrophy remaining. The lips and the conjunctivæ are more or less tumefied and changed in color; the mucous membrane of the tongue is often thick and fissured; the lining membrane of the palate, in most of the cases examined by M. Biett, contained agglomerated tubercles in a state of ulceration, and extending to the uvula. In several cases, where the voice was greatly changed, the mucous lining of the larynx contained tubercles. In a patient from Guadaloupe, M. Biett found the arytenoid cartilages carious, and nearly all destroyed. The gastro-intestinal mucous membrane is generally softened; in the stomach it is often thinned; in the small intestines thickened. In the majority of cases, death is occasioned by ulceration of the ileum, colon, or ileo-cæcal valve; the ulcers either occupy the glands of Peyer, or are the results of the tubercles. In many subjects the lungs are more or less diseased. Scrofulous tubercles, either softened or in a state of crudity, have been noticed by M. Biett in a patient from Guyana, and in another who had made several voyages to the East Indies. He regards this lesion, however, as accidental; we have never seen it ourselves.

Baron Larrey has seen scrofulous tubercles in the mesentery and disease of the liver. We have seen the inner membrane of the cavæ and pulmonary veins and aorta of a brown color, the blood being fluid, oily, and of a dark red hue. The bones are occasionally spongy, softened, and deprived of marrow. In conclusion, we should remark, that the pathology of this disease has been chiefly investigated by European practitioners, particularly Schilling, Valentin, Raymond, and Biett. It were desirable that further researches were made by practitioners in hot climates, where the disease chiefly prevails.

Dr. Fabre, who studied this disease in Brazil, was struck with—1. the remarkable diminution of size of the brain and spinal marrow, which presented a kind of atrophy, without any appreciable alteration of structure; 2. the quantity of serum effused into the ventricles and the vertebral canal; 3. the constant presence of a very great number of the small glandular bodies, called *glands of Pacchioni;* 4. the occasional existence, on the surface of one of the hemispheres, of

circumscribed suppuration of the membranes of the brain adherent to it, from which was discharged a colorless plastic pus.

Diagnosis.—The loss of sensibility in the majority of cases, and the opposite state of its abnormal increase in the exceptional ones, will always distinguish the spots of tsarâth from those of erythema and of ephelis. Much obscurity has arisen from the manner in which writers have confounded different diseases under the same name; still elephantiasis Græcorum (*tubercular lepra*) cannot be mistaken for *lepra*, properly so called (*lepra vulgaris*), which has been described in the chapter devoted to scaly diseases; although bearing the same name, their respective characters are too well marked to leave any doubt. The *Arabian elephantiasis* is a disease altogether *sui generis*. Instead of tubercles, or ill-looking tumors, separated by deep folds, and developed in the dermoid or subcutaneous cellular tissue, we have an uniform tumefaction of some portion of the body, especially of the legs. The disease, in fact, is not seated, at least in the commencement, in the integuments. Elephantiasis Græcorum has been confounded with *syphilis;* and, by some authors, said to be a modified form of this latter complaint. An attentive consideration of a single case is sufficient to prove the difference between the two diseases. Besides, the tubercles of syphilis are hard, small, and copper-colored; while those of elephantiasis are large, soft, distinct tumors. In *syphilitic ulcers* the edges are hard and clean, the bottom of the sore greyish, deep, and surrounded by indurated cellular tissue. The form of the ulcer is circular; while the ulcers produced by elephantiasis are superficial, smooth, and rest on a soft, fungous tumor. Finally, we cannot confound *syphilitic spots* with those of elephantiasis; the former have a peculiar color, being always indistinct, and never red, or accompanied by the puffy appearances seen in elephantiasis. The sensibility of the skin is not altered.

Prognosis.—Elephantiasis of the Greeks is a dangerous disease, and almost always an incurable one. The patients generally die, worn out by their sufferings and by slow fever, or the mucous membrane of the viscera becomes involved, and they are cut off by chronic gastro-enteritis. But the disease sometimes terminates more favorably; the indolent tubercles are attacked by inflammation, they gradually diminish, and finally disappear. In other cases they ulcerate; the ulcers are covered with dark adherent scabs. The latter fall off, and the skin underneath is cicatrized. Unfortunately,

such cases are rare; they seldom occur except in young healthy persons, attacked for the first time, and not long exposed to the influence of the exciting causes of the disease.

Treatment.—The various remedies employed in the treatment of this disease are generally unavailing; first, because the patients have been long subject to the disease, and have tried almost every remedy before they came to Europe; and, secondly, because in its advanced stage, elephantiasis Græcorum is frequently accompanied by an irritation of the mucous membrane of the intestinal canal, which prevents the use of energetic and otherwise efficacious remedies. If encountered at its commencement, the disease should be treated with energy and vigor. In addition to general remedies, means should be used to produce a strong impression on the affected parts. After the example of Larrey, the actual cautery might be fearlessly employed. We ourselves even saw admirable results by means of cauterization, applied by Biett to a case in which the tubercles were confined to the face, and were arrested in their progress by it.

If this is not resorted to, topical means must be used for the purpose of increasing the vitality of the parts. Blisters may be applied on the affected parts, and frequently renewed: a plan, by means of which we have seen Biett restore the sensibility to parts when it had been lost. Dry frictions, or frictions with stimulating liniments, may be used for the same purpose with advantage; also irritating vapors, baths, and vapor douches, which last may be directed upon the seat of the disease for fifteen or twenty minutes, the patient being directed to knead the tubercles constantly at the same time. Frictions with ointment containing iodide of potassium may also be used.

Preparations of arsenic are among the most useful internal remedies, and are the more likely to be of service, as the disease is the more recent. Pearson's solution and the Asiatic pills have seemed to us to answer better than Fowler's solution.

Cinchona appeared to be very useful in a case treated in London by Dr. Bishop, who employed stimulating frictions at the same time. Mercurial preparations have always proved useless, and sometimes have caused inconvenience, at the St. Louis Hospital. Sometimes constant irritation of some portion of the mucous membranes renders the use of any remedies impracticable. In such cases soothing and mucilaginous drinks, low diet, warm baths, and especially opiates, are very beneficial. Sulphur baths, and particularly vapor baths, constitute indispensable auxiliaries to every kind of

treatment. The regimen should always be supporting and nourishing.

It is absolutely necessary that the patient should leave the country where he contracted the disease, as long as the least chance of cure remains.*

FRAMBŒSIA.

SYN.—*Pian; Yaws; Micosis of M. Alibert.*

The American disease, called *pian* or *epian*, seems to be identical with that denominated *yaws* in Guinea. They have been described by Bateman under the name of frambœsia, derived from the peculiar appearance which the disease generally assumes. It is very rare in Europe, but is indigenous in Africa, and very common in America and the West Indies. It has been particularly studied by Hillary, Bancroft, Winterbottom, Schilling, Ludford, Horn, Mosely, Adams, Rochoux, Levacher, and Dazelle.† We saw one very remarkable case of this complaint in the wards of M. Biett.

Frambœsia is characterized by the presence of small red tubercles, like vegetations, which are isolated at their summits, but collected together at the base, and often resembling in color and form raspberries or mulberries. It may occupy any part of the body, but most frequently attacks the scalp, face, axillæ, groin, margin of the anus, or genital organs. It is impossible to determine the duration of this disease; it is commonly proportionate to the state of the individual and the strength of his constitution; it may continue for years, or even perpetually.

Symptoms.—In the majority of cases there are no general precursory symptoms; in others, the patient experiences some

* A new remedy for elephantiasis, called *assacou*, the name of a tree (hura Brasiliensis), indigenous to the Brazils, was sent to France by their minister to that country in 1848. It is given in the form of extract of the bark, and also in infusion and in baths; but its true therapeutic value has not yet been established by a sufficient number of observations.—(*L'Ab. Med.*, Oct. 1848; also *Braithwaite's Retrospect*, Jan., 1850.) H. D. B.

† Dr. James Maxwell has published a valuable essay on this subject, founded on extensive observation of the disease in Jamaica, for which, as an inaugural dissertation, a gold medal was awarded by the University of Edinburgh. He regards yaws as the source from which tubercular leprosy originally sprung, and afterwards spread over the globe, by virtue of its hereditary power. The work is illustrated by engravings, giving representations of the disease in its different forms and stages. Dr. M. mentions a paper by the late Dr. James Thompson, in the Edinburgh Medical and Surgical Journal (vol. xviii.), as the most original and best monograph on yaws with which he is acquainted, and also alludes to other sources of information respecting the disease. (*Observations on Yaws, and its influence in originating Leprosy. Edinb.*, 1839.) H. D. B.

malaise with pains about the loins, after which the disease appears in the form of small, dusky-red spots, like flea-bites, which are usually collected in groups. Each spot becomes the seat of a papular-like eminence, the epidermis soon exfoliates, the eminences become more prominent, and we now find a spot covered by a number of vegetations which are isolated at the summit and united at the base; they are indolent and of a dull red color. The tumors are sometimes circumscribed, and resemble raspberries or mulberries. In other cases they extend over a large surface, and in the one which we saw, the eruption occupied the anterior and lower third of the thigh; the epidermis was completely destroyed, and the disease seemed to consist in hypertrophy of the skin, which was raised into a great number of vegetations.

The parts in the neighborhood of the diseased skin are hard, and the tubercles likewise firm, slightly inflamed, and generally covered by thin, dry, tenacious scales. Sometimes the inflammation is more severe, ulceration sets in, and a yellow or sanious fluid, of very nauseous odor, is discharged. The discharge now collects between the tubercles and forms scabs, which may for a time conceal the real nature of the disease.

Such is the usual progress of yaws; but it is probable that there are several varieties which, though differing from the present description, yet belong to the same disease.

M. Biett had a patient in his ward laboring under a modified form of yaws; the tubercles were round and of a violet color, varying in size from a pea to a nut; they were seated in the inner and lower part of the thigh, were collected in a circle, and formed a fungous eminence strongly adherent to the subjacent parts; around were numerous scars from old tubercles, and there were some recent ones on the back and instep.

Finally, in the last stage of the disease, one of the tubercles enlarges, ulcerates, and discharges a very acrid fluid, which corrodes the surrounding skin; in the colonies this is called the *mother yaw*. The disease may last for an indefinite period without any serious derangement of the health.

Causes.—Yaws appears to be a contagious malady; it is communicated through the matter discharged from the tubercles. Some have thought it may be carried from one individual to another by flies, &c.; it is said to attack only once, and may arise spontaneously. Yaws occur at all ages and in both sexes, but children are most subject to it. Atmospheric influences, the poor food, filth, and the habits of the negro

seem to favor its development.* It attacks, in preference, persons of weak, lax fibre, and those who are scrofulous or rachitic; besides, it is almost exclusively confined to the black population.

Diagnosis.—The characters of this disease are extremely well marked; but it may not be amiss to state briefly the symptoms which distinguish it from *syphilis*, the more particularly as some writers have confounded them together.

In the general characters of the two complaints there is no resemblance whatever. They are both, it is true, contagious, and *syphilis* occasionally produces a tubercular affection; but it attacks whites as often as blacks, and never arises spontaneously. *Syphilis* also may occur an indefinite number of times, and the tubercular form is almost always attended by other signs of secondary syphilis.

Again, the particular appearance of tubercular syphilis is very different from that of yaws; in the one we have the mulberry-looking tubercle, in the other indurations of a copper or violet color, circumscribed, &c., and generally attended with various other symptoms of syphilitic contagion.

Still, cases of frambœsia are recorded, which are evidently cases of pustular or tubercular syphilis. Whether they are really such, we are unable to decide, at the same time that our study of the disease, as described by authors, does not warrant us in regarding it as a form of syphilis.†

Prognosis.—Yaws is not a dangerous complaint; it is less severe in the white than in the negro. Some forms of the disease are more obstinate than others; its duration is less when it attacks females or children, and its severity and dura-

[* Since negro emancipation, this disease has become much rarer in our colonies. B.]

† Dr. Maxwell gives the following diagnostic marks between syphilis and yaws:—

1. Syphilis appears in six or eight days after contagion; yaws takes from six weeks to three months.

2. Syphilis may occur frequently from distinct infection; although yaws may recur oftener than once, from the susceptibility not having been destroyed, yet it cannot be communicated by future inoculation, so as to display the disease in its normal state.

3. The constitutional symptoms of the venereal disease are generally progressive, and seldom disappear without the aid of medicine; the yaws generally admits of a spontaneous cure.

4. Syphilis is capable of affecting the fœtus in utero; yaws has never been known to do so.

5. Exanthematous eruptions and febrile affections have a temporary power in suspending yaws; not so in syphilis. (*Prize Essay on Yaws*, by Dr. James Maxwell. Edinb. 1839, p. 34.) H. D. B.

tion seem to be directly proportionate to the condition and extent of the eruption.

In mild cases nature sometimes effects a cure; the tubercles gradually disappear; in the majority of cases, however, they ulcerate or yield to caustic applications, and leave indelible scars behind them. In other cases, they resist every means employed, and may continue indefinitely without serious injury to the health; or the disease may become constitutional, attacking the bones, and sometimes terminating in death.

Treatment.—The treatment of yaws is chiefly local, though certain internal remedies are highly spoken of. Sudorifics and purgatives are occasionally useful, but the main remedy is mercury. Some writers, however, pretend that mercury is not only useless, but may aggravate the disease, and that the cases in which it succeeded were examples of syphilis mistaken for yaws.* The country people, especially the negro women, use sudorifics with benefit, *to drive the disease to the surface*, as they say, and afterwards add to the usual articles for this purpose guaiacum and sarsaparilla.

In all cases we must confine the patient to a proper regimen, and if he be of weak or scrofulous habit, administer some tonic. It is probable that some of the preparations of arsenic might be administered with advantage. As an external application, the ointment of the proto or deuto-iodide of mercury should be had recourse to. When these means fail, we must employ more powerful remedies, and apply, as a caustic, the arsenical paste, or the binitrate of mercury. M. Biett employed the actual cautery with complete success in a very severe case, where every other means had failed.

The arsenical paste (of Frère Côme) is an excellent remedy, and we have seen M. Biett use it for other diseases without the slightest inconvenience; but it should never be applied over a surface larger than a half crown piece. The binitrate of mercury also acts powerfully, and should be sparingly used.

* Dr. Maxwell states that experience led him "to look upon mercury as an exceedingly dangerous and destructive medicine in the treatment of yaws," and that he abandoned its use in every case. His plan of treatment consisted of the warm bath, decoction of sarsaparilla, and the internal use of hydriodate of potassa, from which latter article he derived the greatest benefit in alleviating the pain and producing sleep, as well as in its effects in improving the general health, which is the most important point in the management of the disease. He cautions particularly against the use of local applications of a nature to dry up the spots suddenly, before they have matured perfectly. He considers all topical applications pernicious, until we first endeavor to destroy the susceptibility of the disease by constitutional remedies. (*Op. Cit.*) H. D. B.

Finally, the remedies just mentioned may be followed up by vapor baths and douches.

MOLLUSCUM.

SYN.—*Mycosis fungoides of M. Alibert.*

The disease of which we are now about to speak has been called *molluscum*, from the similarity of the tubercles which characterize it to the eminences that grow on the bark of the maple tree. We know little of the history of this disease, which was first noticed by Bateman. Molluscum consists in the presence of numerous small tubercles, with very slight sensibility, varying in size from that of a pea to a pigeon's egg; they are round, or flattened, and irregular; sometimes seated on a broad base, at others they are attached by a peduncle; in a few cases, they are of a brown color, but generally preserve the color of the skin. They grow very slowly, and may last during the whole period of life; they occur chiefly on the face and neck, but may cover the whole body. Bateman divides this disease into *molluscum contagiosum* and *molluscum non-contagiosum.*

The *non-contagious* species, consisting in indolent tumors of variable size and form, and frequently pedunculated, is less rare than the contagious. Writers, however, are not agreed on the true nature of the disease. Tilesius published a very remarkable case, in which the face and body were covered by small tumors, containing an atheromatous substance. M. Biett had seen several cases of the same kind, but the tumors were solid. In a patient affected with prurigo senilis at the Hospital of St. Louis, we saw a number of those small tumors spread over different parts of the body: the largest was as big as a nut; the rest not larger than peas; they seemed to be formed of dense fibrous substance, and were not painful to the touch.

M. Biett observed another species of non-contagious molluscum, occurring chiefly in young puerperal females; here the tumors are small, flattened, slightly divided at the summit, irregular in form, and of a brown or yellowish color; they chiefly occupy the neck.

Contagious molluscum is a very rare disease: it has not been met with in France, and Bateman saw two cases only; it consists in round, prominent, hard tubercles of various sizes; the tumors are smooth, transparent, sessile, and discharge a whitish fluid from their apex. One of the cases described by Bateman occurred in the person of a young

female; her face and neck were covered with numerous small tumors, some not larger than pins' heads, others as large as small beans; they were hard and semi-transparent; their surface smooth and shining, and their color nearly the same as that of the skin; they were slightly contracted towards the base. On pressing the largest of the tumors, a milky fluid was discharged through a central opening which had not been visible previously. The disease had existed for a year, but only a small number of the tumors had continued to increase; some of the latter appeared to be on the point of suppurating. The patient's health was bad, and she had become very thin since the development of the cutaneous affection. The disease was communicated from a child whom the woman nursed, and on inquiry it was found that the child took it from a servant who had it on the face.

In the second case mentioned by Bateman, the complaint had been communicated from one child to another. Dr. Carswell has brought under our notice a remarkable case of molluscum, similar to those related by Bateman: he observed it at Edinburgh, with Dr. Thomson, in a child at the breast, who had taken it from his brother, the latter having taken it from a schoolfellow. The disease passed from the infant's face to the mother's breast, and also attacked two other members of the family. The child died, but no examination of the body could be obtained: the symptoms of the disease in these cases were the same as those given by Bateman.*

* In the Edinb. Med. and Surg. Journ. for July 1, 1841, are papers by Drs. Henderson of Edinburgh and Robt. Patterson of Leith, describing this disease, with drawings of the general appearance of the tubercles, and also of their intimate structure. Dr. H. had seen five cases, which, with the three of Dr. Patterson, he says, make twenty cases of the disease on record. In the Lond. Lancet for May 15, 1841, is also a clinical lecture on it by Mr. Fred. H. Thomson, and two plates exhibiting its appearance and character; and in the Brit. and For. Rev. for Jan., 1840, is a case by Mr. C. Fowler of Cheltenham, taken from the "Transactions of the Provinc. Med. and Surg. Association," vol. vii, which work is said to contain an excellent engraving of the disease.

Dr. H. H. Smith, of Philadelphia, has described an interesting case of disease under this name, in the Amer. Journ. Med. Sciences for Oct., 1851, illustrated by three woodcuts, showing the general appearance of the tumors and their distribution on the body, and the appearances presented under the microscope by the contents of one of the largest of them; he has also given a summary of the views entertained by different writers on the subject, and accounts for the discrepancy between the descriptions given by them by their having described different varieties of the same disease. He regards as the pathology of the disease "an obstruction, or a fibro-scirrhous or medullary degeneration of the sebaceous follicles." His case occurred in a female about fifty-five years of age, and followed an injury, the first tumor appearing at the seat of the injury, at the end of about six weeks. Tumors of different sizes appeared afterwards on different parts of the body and head, and the disease proved fatal at the end of about two years. The contents of the tumors showed his case to be of the medullary variety. H. D. B.

Causes.—Upon this point nothing positive is known.

Diagnosis.—The form, color, arrangement, and progress of the tumors will enable us to distinguish them from the tubercles of syphilis, yaws, or elephantiasis of the Greeks. The contagious species is easily distinguished from the non-contagious one, and if we had a sufficient number of accurate observations of the two species, we would probably find that they bear little resemblance to each other.

Prognosis.—The prognosis of the non-contagious variety is favorable; the progress of the tumors does not seem to depend on any constitutional derangement; they seldom produce irritation, and after a certain period, become stationary for the rest of life. Contagious molluscum is a much more severe and rebellious affection.

Treatment.—We know so little of this disease that it is difficult to say anything satisfactory of the treatment. M. Biett has employed a great number of remedies in cases of non-contagious molluscum. In the first variety he was unsuccessful: in the second he found some benefit from stimulants and styptic lotions: in one case, where several tumors occupied the neck of a young female, he obtained a complete cure in a few weeks with a lotion containing the sulphate of copper. Finally, Bateman has given the preparations of arsenic, and particularly Fowler's solution, with benefit, in contagious molluscum.*

* Sulphate of copper, both in strong solution and in substance, caustic potash, and nitrate of silver in substance, have been used with success in the contagious variety. The tumors are said to be so insensible that escharotics give no pain. Dr. Patterson (*loc. cit.*) considers internal remedies as generally too tedious, when local means give so little pain, and are so speedy and effectual in their operation. I have but very slight practical acquaintance with the disease. H. D. B.

Dr. Velpeau has frequently seen the first variety of this among negroes — pedunculated tumors — no treatment probably will do any good —

MACULÆ.

Syn.—*Dermatoses dyschromateuses of M. Alibert.*

In addition to the various inflammatory affections already described, the skin may be the seat of certain changes of color which merit attention. In speaking of these changes, we shall confine our description to such as are really connected with the tegumentary system, omitting those which, like chlorosis and jaundice, are merely symptomatic of some other and more deep-seated disorder. Hence, under the order Maculæ we shall include those diseases only which depend on some alteration of the coloring matter of the skin: they are characterized by *change* or *absence* of the natural color of the skin, giving rise to spots of various appearance and different size.

Maculæ are either general or partial; the latter, it is true, may cover nearly the whole of the body, but then they are separated by intervals of normal-colored skin; sometimes they occupy one region only, as in *lentigo*, when confined to the face; in other cases, *nævus* for example, we have a single spot. The duration of this order varies with each species; when the disease is congenital, or spread all over the body, it generally lasts for an indefinite period; the *ephelis* is the only species to which a definite duration can, in a certain degree, be attributed.

Maculæ evidently depend on some alteration of the coloring matter. It is, therefore, important to distinguish them from those changes of color which depend on the vascular system, or on the presence of coloring matter in the blood; for we cannot but think that ephelis and icterus, vitiligo and chlorosis, differ essentially both in their seat and nature.

Causes.—The cause of most species of maculæ is totally unknown. We are aware, for example, that the skin assumes a general bronzed tint after the administration of nitrate of silver, but as yet neither chemists, anatomists, nor medical men have been able to explain this curious phenomenon. We are equally in the dark as to the cause of nævi materni, and

must rest contented at present with the popular opinion which attributes them to impressions made on the mind of the mother. These effects are often imaginary, and often referred to a cause which is transient in its nature, and only thought of when the attention is directed to it. Still, there are authentic cases in which there was such an exact correspondence between the object by which the mind of the mother was impressed during pregnancy and the mark on the child, that we are tempted to admit that a certain degree of influence may be exerted on the fœtus by impressions during that period. Ephelides appear under the influence of a cause which we can, up to a certain point, appreciate.

Diagnosis.—Maculæ are easily distinguished from all other diseases of the skin, and the symptoms peculiar to each variety will readily enable us to recognise them. Certain *syphilitic* spots, it is true, resemble maculæ, but we shall point out the difference in speaking of the former.

Prognosis.—Treatment.—Though generally incurable, these affections are never immediately dangerous, and seldom injure the health. The species which admit of cure, commonly yield to simple remedies; of the others we know so little, that the failure of our therapeutic means is not much to be wondered at. We shall divide maculæ into those accompanied by *change* of color, and those characterized by *absence* of color.

CHANGES OF COLOR.

These are either *general* or *partial*, the *bronze* color constituting the only *general* change; *lentigo, ephelides,* and *nævi* the *partial* ones.

SLATE-COLORED SKIN.

It sometimes happens that the skin assumes, more or less suddenly, a bronze or slate-color; this especially occurs after the internal use of nitrate of silver; but the change of color may manifest itself in persons who have never employed this remedy; we have seen two cases where the disease could not be attributed to any known cause, and M. Biett saw several others of the same kind. The skin, however, in these cases is much less dark-colored than when nitrate of silver has been taken; it has rather a dirty tinge than a deep hue.

In cases succeeding the use of nitrate of silver, the skin assumes a greyish slate-color, deepening into green under the influence of light. M. Biett, who employed the nitrate of silver with success in several cases of epilepsy, has often had

occasion to observe this effect on the skin. The change of color usually begins to appear some considerable time after commencing the employment of the remedy; the skin first assumes a bluish tinge, which gradually becomes a light bronze-color, particularly in the parts exposed to light. The whole body is attacked at the same time, but the color is deepest where the skin is most fine and exposed: in some cases it gets nearly black. The conjunctivæ, and the line of junction between the mucous membrane and skin, are generally of a livid copper color.

It is worthy of notice that the color of the face becomes deeper under the influence of causes which in the natural state would have produced paleness, and *vice versa*. The disease may last for a considerable time, or even during life. M. Biett saw two persons at Geneva, in whom it had continued for twenty years without any diminution; for the last fourteen years he had been in the habit of frequently employing nitrate of silver for epilepsy; and in many of his patients the discoloration continues unabated. It sometimes diminishes gradually, but there is no example of its having completely disappeared. The general health is never deranged, nor is there any change in the tissues intimately connected with the skin; the hair remains intact, but the nails have commonly a bluish tinge. Old cicatrices usually present the same bronzed color as the skin, but those which arise from wounds inflicted after the appearance of the disease are white.

The discoloration of the skin, now under consideration, has been observed by a great number of medical practitioners, who have employed the nitrate of silver in the treatment of epilepsy. Fourcroy was the first who directed attention to this point; since his time we may cite the names of Powell, Marcet, Roget, in England; Albers, Reimar, Schleiden, in Germany; Butini, Delarive, and Odier, in Switzerland; and of M. Biett, in France: the latter gentleman has had twenty-two cases under his care (fifteen males, seven females), without counting those which he had seen in England and Switzerland. In most of these cases time had no influence on the disease.

We may now ask how does the nitrate of silver act on the coloring matter of the skin? does the effect of the remedy depend on some chemical combinations produced through the agency of light? We are unable to tell: the theories hitherto advanced are not satisfactory; and most of the questions on this point, addressed by Albers of Bremen to the Medico-Chirurgical Society of London, still remain unanswered.

We are not acquainted with any remedy for this disease;

every mode of treatment hitherto adopted has failed. The stimulating baths, recommended by some writers, can produce no effect; M. Biett tried them, in some cases, without success; blisters also fail, though an English author pretends that they restore the skin to its natural color; M. Biett has proved this to be erroneous. It is probable, however, that successive blisters might have some effect, but it is evident that so severe a remedy could never be applied to the face, or other exposed parts of the body.

[Dr. Patterson, who has recently instituted a series of experiments, with a view to clear up this subject, considers that the nitrate of silver is readily decomposed by the saliva, by the simplest articles of diet, and by the healthy and diseased secretions of the stomach itself; so that it cannot pass into the circulation as the nitrate, but in some other combination (the chloride, perhaps), to which must be attributed its beneficial and curative effects in epilepsy, &c. Dr. Patterson attributes the discoloration to the decomposition of the chloride of silver circulating in the cutaneous tissues, through the chemical action of the sun's rays, and the deposition there of its metallic basis in a state of extreme disaggregation. Persons of a fair delicate skin are much more liable to it than others. Dr. P.'s researches lead him to believe that the ioduret of silver might be advantageously substituted for the nitrate; and, as the sun's rays have not any decomposing influence on that salt, it is not likely to produce the discoloration above mentioned. He has found a solution of hydriodate of potash to remove the stain on the skin produced by the external application of the nitrate of silver, and that nascent iodine will remove the writing of indelible marking ink, made with the nitrate; hence he supposes that the cutaneous discoloration may be removed by the internal and external employment of the preparations of iodine.—B.]*

LENTIGO.

Syn.—*Ephelis lentiformis; Pannus lenticularis;* Freckle.

Lentigo is characterized by the presence of small spots, of a dusky yellow color, never larger than a lentil, and often much smaller. It is most frequently a congenital disease, but sometimes appears about the age of nine or ten, and continues during the rest of the patient's life. The spots are of a deeper

* The oxide of silver has been more recently recommended as a substitute for the nitrate, and is said not to give rise to discoloration of the skin. H. D B.

color during youth, and usually occupy the face, front of the chest, neck, and hands. The parts exposed to light are thus the usual seat of this affection, but it may extend over the whole body.

Symptoms.—The spots of lentigo are round, of a yellowish color, sometimes very bright and irregularly scattered over the skin; on the neck and cheeks they often run into one another, and form large discolorations. They do not rise above the level of the skin, are not attended by pain, or even itching, and rather cause a disagreeable appearance than constitute a disease.

Causes.—Lentigo generally occurs in persons with a fine white skin, and light or auburn hair; it is rarely seen in the dark-complexioned. The action of the sun sometimes excites it; and in such case it may disappear in time, or with a change of climate. It is most common in warm countries, and in persons of lymphatic temperament, rarely occurring in those of vigorous and plethoric constitutions. It is generally a congenital affection.

Diagnosis.—When seated on the body, lentigo might sometimes be mistaken for a species of *purpura*. The latter occasionally appears in the shape of small round spots, like those of lentigo; but they are of a livid red color, while in lentigo they are yellow: they may exist on the trunk and limbs, without appearing on the face, which rarely happens in lentigo; finally, they last but a certain time, and are generally accompanied by some derangement of the health, while those of lentigo remain for life, and never cause any unpleasant symptom.

When several spots of lentigo are united together they may be mistaken for *ephelides;* but the presence of small round maculæ, their duration, and the absence of pruritus, are sufficiently diagnostic signs. Lentigo sometimes disappears of itself; sometimes continues during life; but as it is not, properly speaking, a disease, it requires no treatment.*

EPHELIDES.

Syn.—*Pannus hepaticus; Chloasma;* Liver spots.

Ephelides are irregular spots, of a yellow saffron color, much larger than those of lentigo, often attended by itching,

* Mr. Wilson recommends in lentigo (*Diseases of Skin*) the lotion of bitter almonds, containing five grains of bichloride of mercury to the half pint; or a weak solution of citric acid in infusion of roses. He has also seen the liniment of lime water and oil, with a small quantity of liquor ammonia, of service.
H. D. B.

and sometimes terminating in a slight exfoliation of the cuticle. They may occupy any part of the body; but generally the front of the neck, chest, abdomen, axillæ, and groin; they seldom appear on the face, except in pregnant women. They may continue for a few days only, or for one, two, or more months; they sometimes appear spontaneously, and disappear quickly, as at the period of menstruation; but in most cases they are developed slowly, and if not submitted to proper treatment, may persist for several months.

Symptoms.—The first symptom is a slight degree of itching, which is soon followed by the appearance of small round spots; these are, at first, of a greyish color, but gradually assume a yellow tinge, sometimes deepening into saffron. The color, however, varies much with the individual and the seat of the affection. At the commencement, they vary also in size, but gradually become more numerous, run together, and form extremely large spots, covering a great surface of the skin; they are not prominent, nor are they attended with any symptom, except troublesome itching. The patches are sometimes so large that, at the first glance, the morbid color might be mistaken for that of the skin itself, and the few points where the natural color of the skin remained, be taken for the discolored parts. The itching is augmented by the least error in diet or moral impressions; it is likewise increased at the menstrual period and by the heat of the bed, being sometimes carried to such a degree as to deprive the patient of sleep. Ephelis may pass away in a few days, or in a few hours, but in other cases its duration is much longer.

Causes.—This affection occurs indifferently in both sexes, but chiefly in women of fine white skin; in dark-complexioned females the spots are of a deeper color. They may be produced by the action of the sun, errors of diet, the use of salt meat, &c.; and often coincide with the suppression of some habitual discharge. As ephelis sometimes occurs in persons laboring under a chronic disease of the liver, it has been attributed to the latter; but the coincidence is rare, and the cutaneous disease is not necessarily connected with the disorder of the liver. In the majority of cases, persons affected with ephelis enjoy excellent health, the disease merely consisting in some change of the coloring matter of the skin. It is this which constitutes the *mask* sometimes seen on the faces of pregnant women.

Diagnosis.—This is generally easy; but ephelis may be confounded with *pityriasis*, *syphilitic* spots, or some *nævi*.

Pityriasis.—*Pityriasis versicolor* is a scaly disease; the desquamation is formed by layers of altered epidermis, while

in some rare forms of ephelis we have a slight farinaceous exfoliation. Still the diagnosis may be difficult when the former is attended with a yellow tinge; it never, however, presents the pruritus constantly existing in ephelis.

Venereal spots.—The livid, copper-colored spots, the absence of desquamation and itching, the previous history and attendant symptoms, will always serve to distinguish spots depending on a venereal taint. Some *nævi* of a dark yellow color, and not elevated above the surface, may resemble ephelis, but they may be distinguished by their being few in number, or single, by the absence of itching, their being congenital, and their incurability.

Prognosis.—Ephelis is a very slight affection. The spots which appear during pregnancy soon fade away, but should they persist, they require no treatment; the same remark is applicable to ephelis when connected with menstruation. Under other circumstances, it causes no other inconvenience than a considerable degree of itching, which is usually removed by appropriate treatment.

Treatment.—Astringent, alkaline, and stimulating applications, intended to give tone to the skin, are useless, and may prove injurious. A more simple treatment is all that is required. Some sulphureous water, as that of Enghien or Cauteretz, may be given internally, with two or three sulphur baths every week, the bowels being kept open by laxative medicine. This treatment is generally successful. When first administered, the Enghien water should be diluted with two thirds of milk or barley-water, and the quantity of the sulphureous water gradually increased until it can be taken pure. When the spots occupy the inside of the thighs, groins, &c., and cause severe pruritus, it may be useful to apply, alternately with baths, a lotion containing an ounce of sulphuret of potassa to a quart of water. It is scarcely necessary to add, that the patient should avoid all excess in diet, and abstain from stimulating drinks.*

NÆVI.

Syn.—*Spili; Maculæ maternæ;* Mother marks; Moles.

Under this head are comprehended all those congenital

* Dr. Lilienfeld recommends for the removal of "*maculæ hepaticæ*" that a purgative should first be taken, and warm soap-suds baths used for three or four days, to soften the skin. The spots are then to be washed every night on going to bed with the tincture of hellebore (*veratrum album*), and in the morning washed and rubbed with a piece of flannel, wet with warm soap-suds. The tincture of hellebore should be prepared with the fresh root. He says that the spots begin to fade after three days' treatment, and soon disappear completely. (*Bull. Génér. de T* Jan. 30, 1850. H.]

discolorations of the skin which are commonly attributed to impressions transmitted from the mother to her child. In some cases the spots (*spili*) evidently consist in an alteration of the coloring matter of the skin, and are not raised above its level; they may occupy any region of the body, but most frequently the face. Their color may become less bright, but they never disappear completely; and they assume such a variety of tints and forms that it is impossible to comprehend them all in a general description. They are, however, commonly of a yellowish color or black, and in the latter case are covered by short stiff hairs. They are usually of irregular form; but sometimes resemble, in a very curious manner, the shape of certain objects. They may be small, or occupy a considerable surface, one-half the face, a whole limb, or a great part of the body. They occasion no pain and are not attended with itching.

Another form of nævus is connected with the vascular system, and may be divided into two species. In the first, the spots are entirely superficial and are under the influence of the circulation. They are commonly red or purplish, and become deeper from mental impressions, errors of diet, at the menstrual periods, &c. The skin sometimes appears to be slightly swollen. In the second species they are more or less elevated above the skin, oblong, flattened, or pediculated, and constitute the erectile tumors of Dupuytren. Finally, writers have described, under the name of *moles*, small brown spots, which are either superficial or slightly prominent, usually perfectly round, rarely larger than a lentil, and generally surmounted by a few hairs. They seem to be intermediate between *spili* and *nævi*, but are more allied to the latter, for they sometimes excite itching, swell, and become painful, on the least irritation. They are generally congenital, but sometimes occur after birth. We are quite ignorant of the proximate cause of nævi; and, even admitting the vulgar idea of maternal influence, which certainly does not exist in a great majority of cases, we still would have to account for their mode of origin. Some authors think that nævi are more frequent in the children of women who have been subject to inflammatory affections of the skin; but, even if this were the case, it would throw no light on their origin.

Nævi, generally speaking, require no treatment; the first species (*spili*) may be abandoned to nature. We could only destroy them by the knife or by caustics; but the resulting scars would be more disagreeable than the original disease. The treatment of vascular nævi belongs exclusively to the surgeon, and consists in the use of pressure, ligature, removal

by the knife, or the ligature of the vessels which supply the tumor. The cautery seems to be too dangerous a remedy in cases of this latter kind.

LOSS OF COLOR.

The absence of the coloring matter of the skin may be *congenital* or *accidental*, *general* or *partial*.

ALBINISMUS.

This affection consists in a general and congenital absence of coloring matter in the skin, and is the more remarkable that *albinos* do not constitute a separate race of men, but are found amongst all nations.

The skin of the albino is of a dull, white color, like that of milk; the hair is smooth and silky, like the silvery clothing of the goat, and sometimes of a snowy whiteness. The eyebrows, eyelashes, and beard, and the hair in the axilla and on the genital organs are of the same color; the whole body is, besides, covered with a woolly down of a snowy whiteness, and remarkably soft. The iris is of a rose color, and the pupil deep red; circumstances which depend on the absence of pigment in the choroid and uvea. The eyes of the albino are unable to sustain a strong light, under the influence of which the lids contract perpetually, and the pupils oscillate in a very rapid manner; at the approach of night they see distinctly. The moral and physical constitution of the albino corresponds with the weakness of his organization. He is generally weak, small, and delicate, and the intellect dull. Several idiots are albinos. There is no example of the occurrence of this state accidentally; its primary cause is completely hidden from us. Though more common in some parts of the world than in others, it occurs in every climate, and amongst all races of mankind. The characters of this peculiar state are too well marked to render its diagnosis doubtful. It is beyond the reach of our art, and requires no treatment.

VITILIGO.

Syn.—*Achroa; Achrome vitiligne.*

The skin is sometimes the seat of a partial decoloration, or absence of color, constituting an affection known by the name of *vitiligo*, which has been confounded with diseases entirely different from it. The *porrigo decalvans* of Bateman

is a certain form of vitiligo, that is, an essential absence of color of the skin, complicated with an alopecia of a peculiar kind.

Vitiligo is, then, an especial and partial decoloration of the skin, and may be either congenital or accidental. The first of these forms occurs only among negroes, on different parts of whose bodies white spots of various shapes and size are sometimes found, and who are then called *pied negroes*. When these patches are on parts covered with hair, that is also white.

Symptoms.—Vitiligo is most frequently accidental, and, indeed, this is the only form which affects white persons. It may appear on any part of the body. On parts not covered with hair it is characterized by smooth patches, of a milk-white color, usually of a circular form, but sometimes in longitudinal striæ or streaks. Its development is unattended with either heat or itching, and its most frequent seat is the scrotum.

When on the hairy scalp, without any precursory heat or itching, the hair begins to grow thin on a certain part, and a whitish spot is soon seen, indistinctly defined, and losing itself in the surrounding healthy skin. The decoloration and alopecia progress together; and when the disease is fully developed, it consists of an entirely bald spot, of a remarkably milk-white color and with a smooth and shining surface, and with limits so perfectly defined that the hair about its borders is as strong and thick as on any other parts of the head. There may be several spots, and they may extend and become confluent, and thus cause baldness of the greater part of the head. The disease may affect any part of the scalp, but occurs more frequently on its posterior portion. It usually lasts for some time; sometimes for years. It may appear on all parts covered with hair, and present the same character as on the scalp.

Causes.—Vitiligo occurs at all ages, but more frequently from twenty to thirty years, and is more common in females than in males. It seems to be connected with the lymphatic temperament; but it is difficult, if not impossible, to ascertain its causes. It is never contagious.

Diagnosis.—The characters of vitiligo are very distinct and easily recognised. When on the hairy scalp, the baldness which it produces might be confounded with that resulting from favus; but in vitiligo the skin is colorless, retains its normal thickness, and is always covered with a kind of down; while in favus the skin is thin because there is a cicatrix, it has a peculiar color, and is entirely destitute both of down

and of hair. We should not confound it with the white lines which are found on the mammæ or abdomen of women who have been pregnant or affected with dropsy, &c.; for the latter depend on laceration of the rete mucosum, from over distension of the skin.

Treatment.—We have seen several cases of vitiligo in the wards of M. Biett at St. Louis; but the means employed in the treatment of this affection were never attended with benefit. Fortunately, it is one which calls for little interference on the part of the medical man.*

* The term vitiligo is applied to affections entirely different from each other by different writers. Wilson makes it a synonym of lupus exedens, while Erichsen (*Lond. Med. Gaz.*, Nov. 14, 1845) describes it as characterized by tumors occurring in clusters, larger than the papulæ of acne, and more solid, and having a tendency to creep along in particular directions, leaving a white shining cicatrix, as if from a burn. J. P. Frank (*Traité de Med. Prat.*, Paris, 1842, vol. i. p. 349) used the word in a still different sense.

In the last edition of their work our authors say, under the head of *prognosis*, that vitiligo is never a serious disease, and that all the cases which they have observed have yielded to appropriate treatment perseveringly used; and that the success has been more complete and more prompt when the disease was seated on the hairy scalp; while under the head of treatment they state that the different means used by Biett, in cases seen by them, have been followed by no good result, and that they have themselves since used different means with varied success. The treatment, they add, consists of means calculated to stimulate and excite the affected surfaces, and they have seen patients improved by the use of warm sulphur waters.

M. Cazenave, in his clinical lectures on the subject, at the St. Louis Hospital (*Gaz. des Hôp.*, Sept. 17, 1850), mentions alcohol, ammonia, and sulphate of quinine as the applications for this purpose, and says that he has often succeeded by rubbing the affected parts night and morning with a piece of linen impregnated with a solution of sulphate of quinine. At the end of a few weeks, he adds, young hair sprouts up, and the natural color of the skin begins to return.

The vitiligo of English writers is a very rare affection, and requires entirely different remedial means, but we do not feel that it would be profitable to devote any more space to the subject in a work like the present. H. D. B.

DISEASES

WHICH DO NOT ADMIT OF BEING ARRANGED UNDER ANY ONE OF THE PRECEDING ORDERS.

LUPUS.*

SYN.—*Lupus vorax; Herpes exedens; Formica corrosiva.*

Lupus commences sometimes with violet-red spots, or more frequently livid indolent tubercles; the chief character of which is their tendency to end in destructive ulceration of the surrounding parts, and even of the subjacent tissues, forming ichorous and ill-conditioned ulcers, giving rise to brownish and usually very adherent scabs, which are followed by fresh destruction after they fall. It presents great varieties in the seat, progress, and extent of the ulcerations, and also in its mode of destruction, and the form of the subsequent ulceration. Sometimes they run along the surface of the skin; sometimes destroy the subjacent tissues. Sometimes lupus is attended by hypertrophy. Hence M. Biett was led to make three principal varieties: 1, a form which *destroys the surface* only; 2, a form which *destroys deep-seated parts;* 3, lupus with *hypertrophy*. These distinctions are founded on practice, and facilitate our description of the disease.

The most common seat of lupus is the face, and it attacks the nose more frequently than any other part of the body; but we are unable to explain this peculiarity. The cheeks, lips, and chin, are the parts most subject to it, after the nose. It may, however, attack any other portion of the body; for the trunk, we generally find it seated on the chest or shoulders; for the limbs, in the neighborhood of the joints, the external surface of the forearm, the back of the hand, or the dorsum of the foot. In some cases it attacks the neck. It may be

* Lupus is classed among tubercular diseases by Rayer and Gibert, and also by some of the English dermatologists, and seems properly to belong among them, for its elementary form is a tubercle in the great majority of cases; and even when it commences on the mucous membrane, the difference in the elementary form is only owing to a difference in the structure of the parts. H. D. B.

confined to a single point, or may attack several points simultaneously, or spread to several parts of the body. The first sign of this disease is, generally, a dull red, small, hard eminence or tubercle, which increases slowly, and seems to occupy the superficial layer of the skin. The summits of the tubercles are occasionally covered by white dry scales. In many cases, several tubercles unite together, and form a soft indolent tumor, which terminates, after an uncertain period, in ulceration.

This is the usual way in which the disease commences; but it is certain that tubercle is not always the elementary lesion of lupus. It sometimes begins with inflammation of the mucous membrane of the nares, attended by redness and tumefaction of the nose. A small crust forms on the part, and is scratched off. A second scab appears, and ulceration has now set in. In other cases, we find a purplish spot, with slight tumefaction, on some part of the face, but chiefly on the tip of the nose. For several months the color becomes deeper and brighter; then appears a slight ulcer covered by a scab, and the ulceration gradually extends in length and depth. Finally, in some cases the skin gradually gets thin and looks like a cicatrix, without tubercle, ulceration, or any other lesion, except a livid spot, from which the cuticle occasionally scales off.

Superficial lupus.—This form of the disease presents some varieties which are worthy of notice. In a few rare cases it seems to be confined to the most superficial layers of the dermis, and occupies chiefly the face and cheeks. There are no tubercles or scabs, but the skin assumes a reddish tint; the cuticle exfoliates, and the integument gradually becomes thin. It is now smooth, red, and shining; and, finally, looks like a cicatrix after a superficial burn. The redness disappears under pressure with the finger, which gives rise to pain, although not painful when not touched. After violent exercise, or excess in spirituous liquors, although not painful when not touched, the affected surface becomes sensitive. When the progress of the disease is arrested, the redness disappears, the epidermis ceases to exfoliate, and the skin remains thin and shining. This is the form to which Biett gave the name of *erythema centrifugum*, of which we have already spoken.

In other cases several small soft tubercles, of a dull red color, form upon the skin; they remain indolent for some time, then suddenly increase, become numerous, and the skin which separates them is slightly tumefied. They now unite at the base, ulcerate at the points, and form an irregular, ill-

conditioned ulcer, covered by a dark tenacious crust, which gradually spreads to the neighboring parts. When the disease extends in this manner, we find several white irregular lines of cicatrix, like those from large burns, forming on the original seat of the complaint. They generally occur after treatment has been employed.*

Lupus may thus attack very extensive surfaces of the body, the whole face, for example: and while it is making fresh ravages, the cicatrized parts, being surrounded by tubercles, often give way. It is always by the formation of new tubercles which circumscribe the ravages of lupus by an indurated, rough, and swollen border, and which afterwards ulcerate, that the disease progresses. We saw a patient at St. Louis in whom the disease commenced in the submaxillary region: thence it gradually extended, in spite of treatment, to the neighboring parts; and, in a few years, had reached the chin, a great portion of the cheeks, and all the front of the neck. In some cases the tubercles commence at the angles of the mouth; the ulcers are covered by thick scabs, and the patient finds much difficulty in opening his mouth.

* The superficial form of lupus differs so much from the other varieties in its constitutional origin, and in the effect of treatment upon it, as well as in its termination, as to render the difference worthy of notice in a practical point of view; and of this form the two varieties described in the text differ essentially in their progress, and in the effects of remedies on them, the first being indolent in its nature, and presenting a *desquamating* instead of an ulcerating surface, while the second is characterized by *ulceration*. The latter variety appears sometimes in those who have had the venereal disease at some period, perhaps long previously, and at other times in those who have suffered from the use of mercury, or from the combined effect of these two causes—and at other times is more directly connected with a strumous constitution. This is the form which has given rise to some confusion among writers, some describing it as a form of lupus and others calling it *scrofula*, and which is sometimes described in the journals under the name of "*strumous phagedenic ulcers.*" It is this form which is so favorably affected by iodine, and usually easily controlled by it, at least temporarily. There is also another variety, which I have been in the habit of referring to the head of superficial lupus, which is characterized by groups of small reddish tubercles, arranged in patches of a circular or oval shape, usually very indolent in their progress, and which are also the seat of *desquamation*, and not of ulceration, but which are easily converted into ulcerating surfaces by irritating applications. The patches spread very slowly by the formation of fresh tubercles on their outer edges, while the centre gradually assumes a whitish and slightly puckered appearance, resembling somewhat the cicatrix left by a burn. I have seen this form most frequently on the face or forehead, and most usually in females of strumous diathesis, and have found it very little influenced by treatment. In one case under my observation for a short time the disease had lasted several years, and had covered almost the whole of one side of the face in a female about thirty years of age. This variety never extends beneath the skin, and is seldom, if ever, attended with hypertrophy. Pain seldom accompanies either of these three varieties.

M. Cazenave, in a recent clinical lecture, (*Gaz. des Hôp.*, July, 1850), describes the last of these varieties, and insists upon the importance of its diagnosis. We have recognised it several years. H. D. B.

The nose is seldom the primary seat of this variety of lupus, but it is attacked in its turn, and the ulcers frequently destroy the sides or extremity of this organ. By proper treatment, however, the formation of fresh crusts may be prevented. The surface is sometimes rough and covered with small red tubercles. In other cases it is lined with furfuraceous scales, like those of the epidermis, which fall off, and leave a white cicatrix underneath. In this state, when the ravages of the disease have been extensive, the face presents a very remarkable appearance; it is covered with irregular scars, some of which are of a pale red color, tense, and shining; thick in some points, but in others so thin that they appear to be on the point of giving way altogether. The latter appearance exists in the parts which have been frequently destroyed by repeated ulceration. In almost all cases these scars are united to the base of tubercles, from which they seem to spring. Sometimes the edges of the scars are partially covered by dark tenacious scabs. This variety may also occupy extensive surfaces of the body.

Deep-seated lupus.—This form generally occurs on the sides or extremity of the nose. It is often preceded by redness and tumefaction of the part, with coryza. One of the alæ of the nose swells, gets painful, and is of violet-red color. A slight ulcer now forms, and is covered by a thin scab; this is removed; another scab forms, which is thicker, and each time a portion of the substance is destroyed. The redness and tumefaction often extend over the tip of the nose to the other ala. The affected parts are now covered by a scab, which gradually increases in thickness. The patient suffers little. The skin and cartilages of the nose are destroyed underneath the scab; and when the latter falls off we find an ill-conditioned ulcer underneath, discharging a quantity of sero-purulent fluid. Some fœtid matter, likewise, is often discharged from the nose. The swelling conceals the destruction which takes place, which is only appreciated when that has gone down. In other cases we have no tumefaction or coryza, but a single red, smooth, soft tubercle, which terminates in ulceration after a longer or shorter time.

The extent of parts destroyed is very variable. In some cases the whole nose is eaten away; in others only the point. But, as new tubercles form on the scars, fresh ulcerations occur, and the surrpunding spots are extensively involved. The nose and the septum also may then be entirely destroyed, leaving only an opening leading into the nasal fossæ. Sometimes the superficial tissue of the nose only is destroyed, giving it a pointed appearance. The nares have then a ten-

dency to become closed up, and are of a red color, except at the superior angle, where the cartilage forms a yellow line. This tendency is more evident in cases of lupus with hypertrophy. In other cases the nose looks as if a portion were removed with the knife.

The destruction of parts is not proportionate to the duration of the disease. Sometimes the whole nose is destroyed in ten or fifteen days; at others a small portion only has been removed at the end of several years. We saw a very rapid case in the wards of M. Biett; a woman, thirty-six years of age, had lost a part of the left ala, but the disease had been arrested by cauterization. The extremity of the nose assumed, from time to time, a livid red color; scabs, with purulent discharge, formed in the nares. The livid tint occasionally disappeared, and at other times was very marked. There were no tubercles. The livid color, however, became deeper, and ulceration set in. The scab became thick within a few days. The patient experienced severe pain; and in five or six days, when the scab was removed, the extremity of the nose was gone. The disease was again arrested by the bi-nitrate of mercury; but three weeks afterwards, the cicatrix assumed a deep red color, and ulceration again set in. A red and very painful point was now seen on the right side of the upper lip. A thick scab formed here, and in a fortnight a portion of the lip was destroyed. As every other means failed, M. Biett again had recourse to cauterization with the arsenical paste, which succeeded. This case illustrates the rapid progress of lupus, and shows that it is not always attended with tubercles. A morbid redness and slight swelling of the extremity of the nose, were all the precursors of the ulceration and destruction of the part; and on the upper lip, the ulceration preceded the redness only a few days.

In almost every case of lupus when seated in the nose, the mucous lining of the nares is attacked, and sometimes the septum is destroyed even before the external parts; in other cases the disease spreads from the skin to the mucous membrane, and destroys successively the lining of the nares, palate, and even the gums.*

* In most cases, when the nose is the seat of the disease, the ulceration is accompanied by the constant discharge of a thin fœtid matter from the nostril of the affected side, which may arise either from inflammation of the Schneiderian membrane, caused by the ulcerated tubercle, or from the actual development of the disease in the mucous membrane of the nose itself. In the former case the discharge partakes more of the character of common mucous coryza. (*Houghton, Cycl. Pract. Med.*) H. D. B.

This form of lupus too often spreads to the face also, and produces more or less destruction of parts.

Lupus with hypertrophy.—This form generally commences on the face, with soft indolent tubercles; they are numerous, slightly prominent, and occupy a considerable portion of the cheek or face, to which they are usually confined. They rarely ulcerate at the summits, but the base enlarges, and the subjacent cellular tissue becomes engorged. After a certain time the whole face is covered with red points, which are tubercles brought to the level of the skin by the swelling of the subjacent parts, and here and there we see a few white spots from the scars of old tubercles. The existence of the scars is very remarkable, for the tubercles, which they replace, seem neither to have ulcerated nor to be covered with scabs; they appear to be removed by successive desquamations. The face may acquire a most extraordinary size in some cases of this disease, the soft, hypertrophied cheeks assuming somewhat the appearance of elephantiasis. The eyelids and skin of the forehead hang over in folds, and the eyes are concealed in the orbits; the lips form two enormous masses of flesh, and the ears are occasionally involved in the same condition. The tubercles, as we have already said, are rarely the seat of ulceration; those ulcers which do occur are slight and covered by a thin, tenacious scab. The surface of the tubercles is dry, of a bluish color, and generally the seat of slight exfoliation.

This disease may continue for an indefinite period of time. When, after judicious treatment, the affected parts begin to assume a healthy condition, the swelling gradually subsides, and the tubercles diminish; the circulation through the vessels of the skin becomes more active, and the integument gradually assumes a healthy appearance, although it is seldom completely restored to its original state. In another form of lupus with hypertrophy, the ulcers are covered by small, soft, fungoid tumors, which are very prominent, and give the face a disgusting appearance. This variety is usually a serious one.

The different varieties of lupus may coexist in the same subject, or even be mixed up together. When the latter occurs, the case is of a most formidable nature; the lower eyelid is frequently destroyed, and the skin of the face is continuous with the conjunctiva; under such circumstances the eye is attacked by chronic inflammation, the cornea becomes opaque, and vision is completely lost; or the eyelid is everted from partial destruction of its tissues. In other cases, when the thick scabs are detached from the nose, we find ulcers,

surrounded by hypertrophied tissue, which latter closes up the opening of the nares, unless great care be taken to prevent such an accident. Finally, in some cases the angles of the mouth and a portion of the lips are destroyed, and the scars which ensue not only cause more or less deformity, but considerably diminish the aperture of the mouth. Notwithstanding these local ravages, the general health of the patient remains unchanged, though occasionally menstruation seems to be deranged when the disease is very extensive.

Lupus is often accompanied by erysipelas of the face; this, instead of being an evil, is frequently a fortunate occurrence. We have many times seen erysipelas produce the most favorable effects in cases of lupus with hypertrophy, the disease terminating in a rapid and unexpected manner. In the most severe forms, when the substance of the skin, cartilages, and bones, have been extensively destroyed, the patient is cut off by chronic gastro-enteritis; with slow fever and colliquative diarrhœa. This fatal termination is, however, very rare, and the disease may continue for years, destroying successive portions of the healthy skin, or the parts already attacked by it. Lupus may attack the nasal cartilages, and leave the bones untouched; indeed, it seems to select the skin, in preference to all other tissues. We have seen many patients at St Louis who had labored under this affection for years, and seldom witnessed destruction of any part of the osseous system, except the bones of the nose. These have sometimes entirely disappeared, leaving only a triangular opening divided into two parts by the remaining portion of the septum.

Causes.—This disease occurs most frequently amongst children and adults: it seldom attacks persons beyond the age of forty years; both sexes are equally liable to it; we meet it more frequently in the country than in towns, and in children of a scrofulous habit; it may recur at the period of puberty in persons attacked during their childhood. On the other hand, lupus occurs in persons enjoying excellent health, and in the vigor of youth. Lupus with hypertrophy is the form most closely connected with the scrofulous diathesis.

Diagnosis.—As lupus may be confounded with several cutaneous affections of the face, it is necessary to point out the characters by which it may be distinguished from them. The circumscribed indurations of *acne rosacea* might be confounded with the tubercles of lupus, in its early stage; but in *acne* the indurations succeed to pustules, they are of a red color, and are surrounded by an erythematous areola; while the tubercles of lupus are livid, indolent, and have been preceded merely by a livid tint of the skin.

Lupus with hypertrophy might, in some cases, be confounded with *Greek elephantiasis*, but the tawny tint of the skin, and the small, irregular tubercles of elephantiasis will serve to distinguish this latter disease. The same characters will assist us in cases where tubercular lepra has become ulcerated in different points, and presents here and there dark-looking scabs. These ulcers are more superficial than those of lupus, and have no tendency to attack the healthy points of the skin. Finally, *Greek elephantiasis* shows itself on several parts of the body at the same time, and then is attended by a variety of local and general symptoms, which are never seen in cases of lupus.

The superficial observer might mistake the incrustations of ulcerated lupus for the scabs of *impetigo;* but the latter are yellow-colored, prominent, rough, and seldom adherent; those of lupus are brown, thick, and very tenacious; besides, the cicatrices accompanying lupus, and the ulcers which appear when the incrustations are removed, are decisive characters of that disease. There are, however, two affections which may be confounded with lupus; we allude to *noli me tangere*, and some forms of *syphilis*.

Under the former term have been confounded lupus and cancerous affections of the face, but they differ essentially from one another. Lupus seldom occurs in persons of advanced age, like *noli me tangere;* it commences with several tubercles, while in cancer of the face we have a single tubercle only; its tubercles are indolent, while those of cancer, surrounded by a hard circumscribed base, are accompanied by lancinating pains. Finally, noli me tangere is attended by inflammatory swelling of the soft parts, is exasperated by the use of caustics, and destroys the deep-seated parts of the face. Cancerous ulcers are painful, moist, and everted, and present a fungous appearance, without the dry, thick scabs, which are characteristic of lupus.*

The diagnosis of lupus from certain forms of *syphilis* affecting the face, is sometimes a matter of much difficulty. When the diseases are confined to tubercles without ulceration, it is sometimes difficult to distinguish them. Syphilitic tubercles are rounded and larger; they are of a dusky copper-color, do not exfoliate, and have much less tendency to ulcerate than those of lupus, which are softer, flatter, and generally covered

* *Cancer* is followed by glandular engorgements; this is never the case with lupus. Cancerous ulcers have no tendency to reparation, but are always destructive, while in lupus, when only superficial, there is such a tendency. Cancerous ulcers are most usually aggravated by cauterization, while those of lupus are benefited, and often cured by it. H. D. B.

by a thin layer of epidermis, partially detached; lastly, syphilitic tubercles of the face generally occur in adults, after the period of manhood, while lupus usually attacks young persons.

We must not lay much stress on the disease being seated on the cheeks or side of the nose, and conclude from this that it is lupus; for experience teaches us that the presence of a tubercle on the side of the nose is almost a pathognomonic sign of syphilis.

In its ulcerative stage, *syphilitic* tubercle also differs essentially from that of lupus; the syphilitic ulcer is deep, its edges swollen, of a dusky copper-color and sharply cut; the ulcer produced by lupus is of a dull red color, and looks as if confined to the surface of the skin. The mode of destruction of parts will also serve to distinguish the two diseases. In lupus the skin is first attacked, and then the cartilages, and after a considerable time the bones. In *syphilis*, on the contrary, the disease commonly commences with the bones, and when these have been struck with caries or necrosis, it extends to the skin. Finally, the tubercle of *syphilis* is almost constantly accompanied by constitutional symptoms, as pains in the bones, nodes, iritis, or ulcers in the throat, palate, &c.

Prognosis.—Lupus is always a formidable disease, not because it threatens life, but from its obstinacy and the destruction of parts by which it is often attended, and the numerous, unseemly, and indelible scars which are left on healing. The prognosis is favorable in proportion as we are called to treat it in an early stage. It is more serious when accompanied by considerable tumefaction of the affected parts, and when the old cicatrices open afresh. As long as the cicatrices remain soft and doughy to the touch, are of a bluish color, and surrounded by tubercles, there is great danger of the recurrence of the disease. The full establishment of menstruation, at the period of puberty, is not attended with sufficient change to render the prognosis more favorable.

Treatment.—The constitutional treatment of lupus is simple enough; it consists in proper attention to the rules of hygiene, the use of baths and bitters. These means are, generally, of little avail against so serious and obstinate a disease. When the patient, however, is of a scrofulous constitution, we must have recourse to appropriate treatment; some benefit may be obtained from the muriate of lime, in solution (one drachm to the pint of water); a teaspoonful may be given every morning, and the dose increased by a spoonful, every four or five days, until the patient takes twelve spoonfuls a day. We may also try a course of chalybeates

(the sulphate of iron, for example), and submit the patient to a generous diet and the action of pure invigorating air. In other cases we may employ the animal oil of Dippel, in doses of five or six drops, gradually increased to twenty-five; the decoction of Feltz, or the preparations of arsenic; but these means are of very doubtful utility, unless aided by local applications. Extremes of heat and cold must also be avoided, because they tend to make the cicatrices break out again; and in females, the menstrual function must be attended to. The local treatment consists, 1st, in the use of resolvent applications, more or less irritating, for the purpose of modifying the vitality of the skin; and 2d, of caustics, which we employ with a view of destroying the diseased surfaces, and arresting the progress of the malady, and making healthy cicatrices.*

Before ulceration has commenced in the tubercles, and in cases of lupus with hypertrophy, we should have recourse to such remedies as favor absorption. Ointments, containing the proto or deuto-iodide of mercury, are the most powerful, and should be rubbed in over every point occupied by the tubercles. M. Biett has often employed the ointment of the iodide of sulphur with very great effect; we remember particularly two cases of lupus with hypertrophy, in which considerable benefit was obtained from frictions with this remedy. Some writers apprehend the development of erythema, or erysipelas, under the influence of these frictions; but should any such complication occur, it is of no consequence, and might, on the contrary, be beneficial.†

* In the form of superficial lupus, accompanied by ulceration, and which is so analogous to, if not identical with, affections described under the name of *scrofula*, preparations of iodine have a commanding influence—of which I have generally given the preference to the iodide of potassium or of iron.

In the different forms of the superficial, and in that with hypertrophy, the liquor hydriodatis arsenici et hydrargyri, or *Donovan's liquor*, referred to under the head of lepra (page 228), has been highly recommended by practitioners of standing, and is well deserving of a trial.

Gibert reports a case (*Bulletin de l'Académie*, Nov. 1844), in which the face was eaten away by tuberculous ulceration, and the fleshy parts of the nose completely destroyed, which was cured by the internal and external use of the *cod liver oil*, after different forms of iodine and various caustics had failed. The disease had lasted six years, and the remedy was taken eighteen months. The patient was a female, twenty years old. (*Ranking's Half-yearly Abstract*, vol. i, p. 86, *Amer. edit.*)

This article is now extensively used in this affection, and is a very valuable adjuvant. We have derived the most marked benefit from it in this as well as in the other forms of disease connected with a strumous habit, and usually give it with the syrup of iodide of iron.

Liquor potassæ has also been used with advantage in l. with hypertrophy. It may be given as recommended under the head of eczema (page 87), and its use should be persevered in for some time. H. D. B.

† In l. with hypertrophy, vapor douches will assist the action of resolvent oint-

When the frictions now spoken of are attended with no benefit, and the tubercles begin to ulcerate, we must abandon our line of treatment, and have recourse, at once, to caustics. These are of different kinds, and may be divided into solid, those in the form of powder, and liquid. There is hardly any other of the solid form than nitrate of silver, and this is of no avail in the treatment of lupus.

Under the second head belong: 1. *Dupuytren's powder*, a mixture of calomel and arsenious acid, in the proportion of one or two hundred parts of the latter. This forms a very mild caustic, and is still one of considerable activity, and is adapted to cases of lupus of moderate extent, and when it occurs in children, females, and those of irritable habit. This may be applied by sprinkling over the surface, when properly cleansed, a thin layer of the mixture, by means of a small puff. Although it seldom causes any pain, or is attended with any swelling of the surrounding parts, it should not be applied over too large a surface at once, not to exceed the size of a quarter of a dollar. A very adherent, greyish incrustation is formed, which often continues for a long time, unless removed by emollient applications. 2. The *arsenical paste* of Frère Côme, a more active and more valuable article, requires caution in its use; it is better suited to old and obstinate cases of the disease, which have resisted milder means, and especially to that severe form of lupus which destroys from without inwards. A small quantity of this spread upon a piece of slate or porcelain, may be applied with a spatula over a space not exceeding a shilling piece in size. We have seen this article frequently applied at St. Louis Hospital, and never knew any severe constitutional symptoms produced by it. It almost always produces local excitement, which sometimes seems to threaten trouble, but which usually yields to the use of proper means. It is, for instance, almost constantly followed by erysipelas, which is sometimes very slight, and at other times very severe, causing great swelling of the face, and violent pain in the head. These symptoms, however, yield in a few days to the use of stimulating pediluvia, a few leeches behind the ears, diet, and emollient or laxative ene-

ments. A very formidable case of this kind, in which the upper lip and both cheeks were so much swollen that the patient had kept his face covered for eighteen months on account of the deformity, yielded in a few weeks to the internal use of Donovan's liquor, and the external use of ointment of iodide of lead and the vapor douche, and the occasional use of one or two leeches to the parts most swollen and inflamed. The effect of a single leech was often very marked.

The use of leeches in this and other forms of lupus has been favorably spoken of by different writers. H. D. B.

mata, and the face returns to its natural state, leaving nothing but a very thick, dark colored, and very adherent scab, which often remains for a long time.

Under the head of liquid caustics belong: 1. *The animal oil of Dippel*, which has an action peculiar to itself in the irritation which it produces, and is particularly suited to those cases in which the nose is the seat of indolent and chronic inflammation, presenting a violet color, with epidermic exfoliation. 2. *The butter of antimony*, an article of but little value; the *acid* nitrate of mercury, a very active caustic, which Biett used with great success. This also causes an erysipelatous inflammation, as arsenical paste does, but less severe. It may be applied over the tubercles, and also over the scars, which continue soft, of a bluish color, and with an appearance as though on the point of breaking out, as well as over the ulcerated surfaces. It is used by touching a surface of the size of a dollar with a pencil of lint dipped in the acid; scraped lint is then placed over the cauterized surface, which is moistened with the acid. The surface touched immediately becomes white; a yellowish scab gradually forms, which is not very adherent, and which falls off in the course of eight to fifteen days. The application of this caustic is usually very painful; but it is only momentary.

Caustics in the form of paste are now generally preferred, because they are easier in their application and management. Among these, the one most used is: 1. the *paste of the chloride of zinc*, a mixture of the chloride of zinc and flour, in the proportion of one of the former to two of the latter. This should be applied, in a very thin layer, over a limited space; it causes considerable pain, which increases and lasts for several hours. A thick, hard, greyish scab follows, surrounded by considerable swelling, which disappears in twenty-four hours; the scab falls off at the end of two days, leaving a surface without ulceration. This paste is useful to destroy tubercles, the resolution of which it soon affects when applied in very minute quantities. 2. *Vienna paste*, composed of caustic potassa and quicklime, is a more energetic article, and is suited to cases in which a rapid effect is desired over a surface of limited extent. A layer of the paste is applied to the part left uncovered, by making a small hole in a piece of adhesive plaster placed over the affected surface. This paste is allowed to remain ten minutes, at the end of which time it is removed, and the surface cleansed. It causes considerable pain, and is followed by a scab, which is thicker than that produced by the chloride of zinc. 3. *Arsenical paste*, composed of ten parts of white oxide of arsenic, twenty parts of

sulphuret of mercury, and fifty parts of animal charcoal. This preparation, now perhaps too little used, excites the part to which it is applied, and produces active caustic effects. Its application is followed by symptoms which seem severe, but which rapidly disappear. A solid cicatrix is produced, which circumstance renders it very valuable in old and obstinate cases of lupus, especially those which destroy deep seated parts.

Whatever the form of caustic employed, it should be applied only over surfaces of limited extent, on account of the accidents which it might occasion, and its activity should always be in proportion to the effect desired, lest you add to the destructive power of the disease itself. Antiphlogistic means must be used to relieve the irritation which may follow their use, and care is necessary not to interfere with the process of cicatrization by too early a removal of the scabs. In the majority of cases, a single cauterization is not sufficient to arrest the disease; we are compelled to repeat it over and over again, perhaps for years. When the disease is extensive, the greatest perseverance is required on the part of the patient and his medical attendant. We saw a young girl, in the wards of M. Biett, the whole of whose face had been successively attacked by lupus; but she was cured after a lapse of several years, and the use of more than fifty cauterizations.*

* The *chloride of zinc paste* is now a favorite application with many. One part of this substance is mixed with two or three of flour, and moistened with as little water as possible. Dr. Ranking says (*Half-Yearly Abstract*, vol. i.) that it is a caustic of great power, and requires delicate management. He directs that it should not be applied thicker than one or two lines, nor left on longer than six to ten hours. He says that an application of one line in thickness, for ten hours, will, in some cases, form an eschar of nearly a quarter of an inch in depth. He represents the pain as being of a very endurable character, compared with that of the arsenical paste, or the nitric acid, and says that he knows of no caustic to be compared with it in the doubtful looking ulcerations which are met with in various parts of the body.

The chloride of zinc has also been used in paste with the anhydrous sulphate of lime, one part of the former to two or three of the latter. A case in which it was thus applied with success is recorded in the London Lancet, Aug., 1840.

The chloride of antimony and the proto-nitrate of mercury have both been used with success by Phillips. (*Lond. Med. Gaz. Mar.* 20, 1840.)

I have used pure creasote, with occasional benefit, freely pencilled over the surface with a brush, in the milder cases of the ulcerating form.

A local application which M. Cazenave has been more recently using, and which he has seen answer the best, is a mixture of deuto-iodide of mercury in oil, in the proportion of 15 to 40 grains to ʒj of olive oil, to be applied to the affected surface every day or two. He sometimes adds lard to give it consistency. He says that the pain produced by it is slight, and that it often causes the resolution of even quite large tubercles. (*Gaz. des Hôp.*, July, 1850.)

"In other cases, he uses equal quantities of the deuto-iodide and olive oil, with the addition of lard to give it consistence, so as to make a kind of liquid paste. When

During the treatment of lupus, the physician must not neglect certain precautions which are essentially connected with the future well being of his patient. Thus he must be very careful to prevent occlusion of the nostrils during contraction of the scars, by introducing daily a piece of prepared sponge; this must be done for a considerable time, because the tendency to obliteration of the nares exists not only during the ulcerative stage, but long after the formation of the cicatrices.

Lastly, the local and general treatment of lupus may sometimes be aided, with benefit, by the use of common or vapor baths, and particularly vapor douche, which are well suited for lupus with hypertrophy.

PELLAGRA.

SYN.—*Pellagra; Pellarina; Scorbuto Alpino; Dermatagra; Scorbutic paralysis; Endemic or Pellagrous Erythema; Elephantiasis Italica.*

By the word *pellagra* is intended a peculiar diathesis, very common in Lombardy, characterized pathologically by various functional disturbances of the digestive organs and of the nervous system, and by a desquamation, of different shades of chocolate color, of the epidermis of parts exposed to the sun in the spring, a desquamation usually preceded by an erythema, which is more or less marked, but always ephemeral, and which ceases when the parts are withdrawn from exposure. These characteristic marks of pellagra vary very much, not only in intensity, but also in manner of appearance, being sometimes isolated, and at other times together; showing themselves in some cases first on the skin, and in other cases first affecting the digestive organs, or the nervous system.

The opinion that pellagra always produces physical deterioration is not true; those with this diathesis from infancy usually present as healthy an aspect as any others, and sometimes retain their flesh and color to the last stage of the disease. Sometimes some members of a family are attacked, while other members of the same family escape, without any apparent cause for this exemption.

In our description of pellagra, we differ from the plan

of this strength, it is applied with a camel's hair pencil, and limited to small surfaces at a time, on account of the irritation by which it is followed. The pain is sometimes severe, and lasts for several hours. A scab is produced, which falls off in the course of six to ten days. These applications may be renewed every six or eight days. H. D. B.

adopted by most of the authors who have written on it, of describing it according to periods or degrees, and much less according to years. The division into *commencing*, *confirmed*, and *inveterate*, is not a practical one; for pellagra may be beyond hope from its commencement. The expressions, *period* or *degree*, which convey the idea of certain fixed symptoms and appearances, are not adapted to the description of a disease so capricious as pellagra. The term *degree* seems to indicate an increasing intensity; while the second or third time of appearance of the disease may be less severe than the first. When we employ these terms, therefore, we shall use them only as synonyms of a more or less advanced stage of the disease; for, like every other disease, pellagra has a beginning, a progress, and a termination. The only natural division is according to its progress, and this may be either *intermittent*, *remittent*, or *continued*. It is *intermittent* when the different symptoms appear in the spring, then disappear, leaving the person in perfect health during the remainder of the year, to reappear with greater or less intensity the succeeding year; *remittent*, when appearing in the spring with an increase of one or more symptoms, the disease decreases in severity, but does not disappear entirely; and *continued*, when it persists during the whole year with very little change in its character. The progress of pellagra is then essentially irregular, for while it sometimes destroys life in a short time, it is often so mild in its nature that the subject of it may for a long period suppose himself in good health. In other cases, after affecting a person seriously for some years, its progress is suspended for some time, and it then rapidly proves fatal.

The commencement of pellagra is marked by the appearance of either a single one of the characteristic symptoms of which we have spoken, or several of them at the same time. We will briefly review the different symptoms: 1. The cutaneous affection; 2. The symptoms connected with the digestive organs; 3. Those connected with the cerebro-spinal system.

1. *Of the Cutaneous Affection in Pellagra.*—This always appears on parts most habitually exposed to the sun's rays, as the backs of the hands and the external part of the forearm, sometimes as far up as the elbow, the dorsum of the feet and the inferior and anterior part of the legs, the superior and anterior portion of the thorax, and sometimes the forehead and sides of the face. The first thing noticed on these points is most commonly simple desquamation of the epidermis, which grows dark, and assumes a more or less deep chocolate color, dries up, and is detached without either inflamma-

tion or redness. It is a sort of pityriasis, without any decided itching and without any pain, a morbid change reaching to the vessels which secrete the coloring matter, and effecting a change in it. In other cases, on the contrary, there is a more or less marked erythema, especially when the rays of the sun have been bright, or the patient has been long exposed to them; the inflammation may even be almost erysipelatous, with the formation of bullæ. In these cases there is a severe burning sensation accompanying the inflammation, which gradually goes off when the exposure to the sun ceases. But this is succeeded by the blackish desquamation of the epidermis, which gives to pellagra its characteristic physiognomy.

In the earlier periods of the disease, the erythema, even when well marked, disappears entirely; the darkened epidermis is detached, and the skin resumes its usual color. But this is not the case when the desquamation has been of long standing. The skin then looks thin and has a shining surface, and resembles the cicatrix of a very superficial burn; patches are often seen on its surface of a more or less brown color, but it is all soft to the touch. Other cutaneous affections, as impetigo, scabies, &c., may complicate pellagra.

The desquamation in pellagra appears more particularly in the spring, but very often bears no direct ratio to the duration of exposure to the sun; and different individuals are very differently affected in this respect. Nor do differences in the extent or severity of the desquamation bear any relation to the internal symptoms, but it appears to be in some respects independent of these symptoms. The desquamation, and still more the erythema in pellagra, does not appear unless the person is exposed to bright light and to the sun's rays.

2. *Symptoms on the part of the Digestive Organs.*— According to Strambio, functional derangement of these organs is one of the most constant precursory symptoms of pellagra; it is also the most frequent symptom during the progress of the disease. Still it does not always take place, and some patients with pellagra reach the last stage of the disease without any trouble of this kind.

Inordinate appetite and diarrhœa are the most frequent symptoms of gastro-intestinal disorder; dysentery is rare. The boulimia is accompanied by neither cardialgia nor fainting; the functions of the stomach are rarely deranged, the principal trouble being in the intestines. The food is rapidly digested and soon passed by stool, followed by an immediate return of the great desire for more. The diarrhœa is often very obstinate, and may itself alone cause death. Still, in some cases, constipation equally obstinate continues to the

close of life, and in other cases these two conditions alternate. There is sometimes emaciation, and at other times the natural flesh is retained to the last.

The alvine evacuations, which are always very watery, and usually yellow or greenish, are sometimes greyish and even black, and are occasionally mixed with blood.

The mucous membrane covering the cheeks, the tongue, and throat, is occasionally sprinkled over with ulcers; and dryness and cracking of the lips, with lividity, have been mentioned as a characteristic symptom of the pellagrous diathesis. Other symptoms have also been mentioned, as a very salt taste in the mouth, especially in the morning, free expectoration, and even profuse salivation.

3. *The Nervous Symptoms* do not usually occur as precursory symptoms of pellagra, but are very marked during the progress of the disease. Occasionally, however, they precede all the other symptoms except the desquamation.

Great depression of spirits without cause at all sufficient to produce it, exaggerated fears, vertigo, disturbed vision, ringing in the ears, buzzing in the head, sharp shooting pains along the limbs, burning of the feet, very painful cramps in the limbs, tetanic contractions, involuntary movements, hasty walking forwards, weakness of the lower limbs, paraplegia, propensity to suicide, especially by means of drowning, a peculiar expression of countenance of a fierce character, sometimes convulsions, and paroxysms of epilepsy, belong under this head. The most constant among these symptoms are vertigo, wandering pains, burning of the feet, cramps, tetanic contraction of the muscles, delirium, and passion for drowning.

In addition to these symptoms, chronic pulmonary affections almost constantly exist in confirmed cases of pellagra, and contribute to the fatal result.

Lesions after Death.—When death is caused by any intermittent disease, no special lesion is usually found which can be referred to the pellagrous affection. In chronic cases, on the other hand, and when there are symptoms of marked lesion of any part, whether of the nervous, or respiratory, or digestive system, changes are always found corresponding with the symptoms observed during life, the most frequent of which are those of the digestive organs.

Predisposing Causes.—Pellagra occurs at the earliest age, and is even sometimes congenital. In three hundred and fifty-two cases, Calderini found eighty-three in which the disease appeared before three years of age, and one hundred and twenty from twenty to twenty-five years. It is often, but not

necessarily, hereditary, and is not contagious, and is but very rarely communicated by a nurse to a sucking child. It is met with more especially in the upper part of Italy and in agricultural districts. All causes which have a tendency to depress the nervous system and derange the digestive organs, may predispose to pellagra.

Exciting Causes.—These have been referred to five distinct heads: 1, insolation; 2, the habitual use of undigestible food; 3, the exclusive use of diet not sufficiently nitrogenized; 4, the habitual use of Indian corn; 5, some peculiar and endemic effect of the soil.

Diagnosis.—No precise diagnosis of pellagra can be made when the cutaneous affection is absent—this affection is well characterized by its cause, the appearance which it presents, its progress, and the marks which it leaves on the skin. It consists of: 1, an irritation of the skin; 2, epidermic desquamation; 3, persistent marks. Of these three changes, the first two are ephemeral.

Nature of the Disease.—Pellagra, whether endemic, epidemic, or sporadic, is a peculiar diathesis, *sui generis*, and which most frequently denotes a cachectic state of the system.

Prognosis.—Confirmed pellagra seems to be incurable; but even in this case the prognosis would be less unfavorable if the patient would persevere in the use of means which have produced favorable results, and would change his location and habits of life. After it has reached a certain point it is beyond the reach of art.

Treatment.—Simple change of nourishment often produces the best results; but wine and animal food do not seem to be indispensable, since individuals with symptoms of pellagra have improved very much in prison when confined to bread and water. But active measures are sometimes required to meet the severe symptoms of the disease, either of a nervous or a congestive character, or both together, as local and general blood-letting, antispasmodics, and opiates. But in the use of these means, the nature of the disease must be kept in view. For the cutaneous affection, simple tepid baths and emollient fomentations are all that is required.

ALEPPO EVIL.

SYN.—*Malum Alepporum; Bouton d'Alep.*

Under this name is comprised a tuberculous disease of the skin, almost unknown in France, but which prevails endemi-

cally at Bagdad, in several towns on the banks of the Tigris and Euphrates, and particularly at Aleppo, whence it derives its name.

We had a very imperfect idea of this affection from the descriptions of M. Bo and Mr. J. Russell, until two French physicians, MM. Guilhou and Lagasquie, studied it with great care during their travels in Syria in 1835. The thesis of M. Guilhou contains the most complete and correct history of this disease that we possess.

The Aleppo evil consists in the eruption of one or more tubercles, varying in size, but regular in their progress and duration; it occurs only once during life, and is followed by a more or less disagreeable and indelible cicatrix.

There are two species of this complaint; in one the tubercle is single and denominated *male;* in the other, the buttons are called *female*, several principal tubercles being surrounded by a number of smaller ones. MM. Guilhou and Lagasquie saw a case in which were seventy-seven principal buttons, surrounded by so great a number of smaller tubercles as to give the disease the appearance of confluent small-pox.

The Aleppo evil may attack any part of the body, but it chiefly occupies the face. This is its favorite seat in the inhabitants of Aleppo; while in strangers, it more frequently appears on other parts. Traces of it have been seen on the genital organs. It usually lasts for a year, but it may continue longer, and has existed from infancy to puberty. We may distinguish three periods of this disease, viz., that of *eruption*, of *suppuration*, and of *desiccation*.

In the *first* or *eruptive stage*, the point of the skin where the evil is about to appear presents a slight lenticular eminence, and this gradually increases during four or five months; there are no local or general symptoms at this time. The *suppurative stage* now commences, preceded by pain, which is sometimes very acute, especially in parts but slightly covered with flesh, and about the joints; ulceration then occurs, and the ulcer is covered by a moist, whitish scab, which separates in part or in whole, and leaves underneath a number of suppurating fissures, from which there is a discharge of pus which is often inodorous, clear, and of a slightly yellowish color. The ulcer is superficial and irregular; its diameter from half an inch to three or four inches. The scab now falls off and is reproduced, or it adheres from the commencement of the ulceration, and a thick ill-conditioned matter is discharged from underneath it. This period may continue for five or six months, and terminates in the formation of a dry, tenacious scab; this is the *third stage* or

period of *desiccation*, which commonly lasts for the rest of the year.

The Aleppo evil occupies the whole thickness of the skin, and consequently leaves an indelible cicatrix behind it, which is usually superficial, but sometimes deep. The latter is generally white; sometimes it is brown and wrinkled; sometimes of a very ugly appearance, distorting the eyelids, nose, &c. The disease occurs in persons of the best constitution, and is rarely complicated with scrofula; but should the latter be the case, it may last for years. It attacks persons of all ages, sexes, and conditions of life; it is found amongst all professions. Children are attacked about the age of two or three; and at Aleppo, where M. Guilhou observed the disease, not a single child reached the age of ten years without having had it, and scarcely a single adult had escaped it. It is not contagious, and attacks strangers as well as natives. It is endemic not only at Aleppo and its neighborhood, but also at Bagdad and many other cities, and especially in the towns between these two cities. There is no fixed time for the appearance of the disease in strangers; some are attacked after six months, others not until fifteen or eighteen years have passed over. In many cases a short sojourn in the country has been sufficient to develope the germ of the malady, which breaks out at a long subsequent period and in some distant country. M. Guilhou mentions two curious facts in connection with this point. An English traveller, who merely passed through Aleppo, was attacked in London several years afterwards. A French merchant, who had escaped the disease during a residence of twenty years at Aleppo, was seized by it at Marseilles, long after his return from Syria. Facts of this kind are, besides, extremely frequent. The proximate cause of Aleppo evil is quite unknown. It has been long attributed, in Aleppo, to the use of water from a particular stream, of which the inhabitants drink; but although this opinion has been strengthened by the minute researches of MM. Guilhou and Lagasquie, it is difficult to adopt it without reserve.

Dogs are subject to the Aleppo evil, which attacks them exactly in the same manner as it does the human subject; but no other domestic animal seems to be liable to it.

This is not a formidable disease; its greatest inconvenience being the inevitable occurence of a scar, which may be very unsightly. According to M. Guilhou, the mode of treatment consists in emollient applications, simple lotions, and the preserving the evil from contact with the air. The remedies generally employed seem to have had no effect

whatever in arresting the progress of the tubercles. M. Salina, however, of Aleppo, assures us that he invariably succeeded in reducing the extent and duration of the eruption by using the actual cautery previous to the period of suppuration. He likewise recommends the use of an ointment composed of camphor, vinegar, and litharge, or of cassia-pulp moistened with rose-water.

SYPHILITIC ERUPTIONS.

Syn.—*Syphilida; Syphilides.*

The venereal disease appears to have first shown itself in Europe under the form of cutaneous eruptions. The earliest writers on syphilis confine their descriptions of that complaint to a pustular affection of the skin; and from their use of the terms moist, ulcerated, crustaceous pustules, they seem to have been acquainted with the several forms of the malady.

For several centuries the syphilitic diseases of the skin attracted little attention, and were but very briefly noticed by writers. In the early part of the nineteenth century, however, they were arranged under a separate class, denominated syphilides, a name given to every species of cutaneous affection consequent on the venereal disease. The species were arranged according to their different conditions or accidental appearances, without any reference to the elementary form of the disease. Hence, distinct varieties were confounded together, and species established on characters that were altogether secondary and insignificant. M. Biett paid considerable attention to this class of cutaneous affections, and studied their progress and development with great care. He endeavored, above all, to trace their elementary characters; and thus succeeded in clearly and satisfactorily distinguishing several varieties. We shall take the results of M. Biett's researches as the groundwork of our descriptions.

We confine the term syphilitic eruptions to cutaneous diseases of venereal origin, actually seated in the skin, and similar, in their elementary characters, to other well known diseases of the integumentary system. We thus reject a number of local symptoms which do not belong to cutaneous affections, properly so called, together with every species of ulcer not preceded by a scab or tubercle. Thus, the true venereal chancre, which is not preceded by any elevation of the epidermis, condylomata, warts, &c., form essential lesions of a peculiar kind, and should not be arranged amongst the syphilitic eruptions.

Syphilitic cutaneous eruptions may be divided into *exanthematous, vesicular, pustular, tubercular, papular,* and *scaly.* The eruption may be *primary,* that is to say, occurring soon after infection, and in most cases attended by other symptoms; or it is *secondary,* coming on at an uncertain period after the disappearance of the primary symptoms of the disease.* It is generally a chronic affection; but primary syphilitic eruption, especially the exanthematous form, may be acute. Persons of all ages, from the infant to the old man, are liable to it.†

The symptoms of syphilitic eruptions may be arranged under three heads. First, we have those common to syphilitic eruptions in general; second, those peculiar to each class; and third, the constitutional symptoms by which they are so constantly accompanied.

1. *Symptoms in common.*—Syphilitic eruptions are commonly of a copper color, though in acute cases the tinge is lighter; it never, however, assumes the true inflammatory redness. Their form is almost always circular. This is manifest in the smaller spots; and, in the larger ones, the tendency to a circle may be traced over the greater part of the ring. The scales are always thin, dry, and of a grey color; the scabs thick, hard, fissured, and of a dark or greenish tint. The eruption may occur on any part of the body, but those most frequently attacked are the face, forehead, nose, back, and shoulders. According to the experience of M. Biett, it rarely occurs on the hands or wrists. The skin, in the intervals between the affected parts, is often of a brownish tint, and the patient exhales a peculiar and extremely repulsive odor. Cold favors their development, while heat has the contrary effect.

The scars left by syphilitic eruptions present also a peculiar and characteristic aspect; they are round, depressed, of a dull white color, and sometimes marked by deep furrows.

To complete the list of the symptoms common to syphilitic eruptions, we must add absence of heat and of itching.

* It may be also transmitted, and constitute *hereditary syphilis.* H. D. B.

† The *time of appearance* of secondary syphilitic eruption is usually from six weeks to two months after the primary sore, but Ricord saw one well-marked case of its appearance at the end of a week after the occurrence of the chancre. (*Acton—Ven. Dis., Lond.,* 1841.) Gibert never saw a case earlier than the beginning of the third week after the first appearance of the primary symptoms, and says that, in most cases, the interval between primary and secondary symptoms is much longer. M. Martin has published an analysis of sixty cases, in which he fixes the extreme limits between a few days and a number of years, even as many as forty. (*Gibert—Mém. de l'Acad. Roy. de Méd.,* vol. x., 1843.) Ricord does not believe that syphilis can break out after a lapse of years.

2. *Particular Symptoms.*—We have already enumerated the elementary forms of syphilitic eruptions, and shall now enter on a particular consideration of each.

Exanthematous syphilitic eruption.—This species presents two distinct varieties:

The first (*syphilitic roseola*) appears under the form of small, greyish, irregularly-shaped spots, of a *coppery* red color, slightly confluent, and which disappear, although slowly, under the pressure of the finger. It occupies chiefly the trunk and the limbs; it often accompanies primary symptoms, and especially gonorrhœa. It is frequently preceded by malaise, and soreness and wandering pains in the limbs; sometimes, although rarely, by slight febrile disturbance, and extends somewhat rapidly, so that it is sometimes general at the end of twenty-four hours. It may remain stationary several days, and even weeks; in this case, the redness fades, and changes into a greyish color, which continues for a still longer period, and is rendered more distinct by any cause which quickens the capillary circulation. Syphilitic roseola is accompanied by a peculiar form of angina, characterized by a violet red color of the mucous membrane of the mouth, the velum, and pharynx, and by marked dryness of these parts. This is often a very important diagnostic symptom. These are the characteristics of primary and sub-acute roseola; it is sometimes consecutive, and in these cases assumes a chronic form.

The second variety (*erythema papulatum*) constitutes that peculiar form of eruption which, as it almost always accompanies gonorrhœa, has been erroneously attributed to the use of balsam of copaiba, and regarded as the effect of that article. But it appears when that disease has been treated by other remedies, and never occurs when that article is given for other complaints.

Syphilitic erythema papulatum is characterized by spots of moderate size, slightly elevated above the surface, of a dull red, or rather of a brownish-grey color, which only partially disappears under pressure of the finger. It is almost always primary.

Vesicular Syphilitic Eruption.—This variety was for a long time considered as one of the most rare forms which syphilis could assume. Biett met with it but a few times; but we have seen it repeatedly, and believe that, if not very common, it occurs more frequently than is generally supposed.

Vesicular syphilitic eruption may present two forms: the first, *that in the form of varicella*, is fully described in the following history of a case which we had occasion to observe in

the wards of M. Biett:—A young girl, sixteen years of age, of healthy constitution, had complained for a few days of some sense of heat in the throat, with difficulty in swallowing, anorexia, and irregular fever; a number of small eminences now appeared on different parts of the body, and she entered the Hospital of St. Louis. The eruption was at once seen to be vesicular, and pronounced chicken pock. It was the sixth day of the eruption; it covered nearly the whole body, and the vesicles were in different stages; some being nascent, others dried up. M. Biett, having examined the patient, discovered a strong resemblance between this eruption and two other cases of syphilitic vesicular eruption which he had occasion to observe before. This diagnosis was soon confirmed by the progress of the disease. The vesicles were small, resting on a broad base, and surrounded by an areola of vivid copper color; their progress was slow, and they were unattended by any local symptoms. They gradually faded away, and the fluid was absorbed; but in some the contents of the vesicle hardened into a thin scab, which adhered for some time. Every one of them, however, left behind a coppery injection of the skin, which presented all the characters of a syphilitic blotch. In addition to these circumstances, and confirmatory of M. Biett's diagnosis, a careful inspection of the throat disclosed a round, greyish ulcer, with sharp-cut edges, &c. The treatment employed was insignificant, as M. Biett desired to see if any more decisive symptoms would manifest themselves; but the patient left the hospital in a fortnight. After the expiration of a month she was visited at home, when her whole body was found covered with true syphilitic pustules.

The second form of vesicular syphilitic eruption is *syphilitic eczema*, characterized by groups of vesicles, scattered over different parts, and resting upon patches of a coppery red color. The vesicles are usually of large size and more elevated than those of eczema simplex; the progress of each individual vesicle is also slower; absorption is more tardy; and the disease terminates with slight exfoliation, which forms on the affected parts numerous borders, the more striking in their appearance from contrast with the points which were the seats of the vesicles.

Syphilitic eczema may also assume the form of eczema impetiginodes. The patches are then covered with small, black, furrowed scabs which are more adherent than in the simple form of this disease, and which are followed by characteristic ulcerations.

Vesicular syphilitic eruption is preceded by some constitutional disturbance, and is most frequently a secondary symptom.

Bullar syphilitic eruption.—This may appear under the two forms of pemphigus and rupia.

Syphilitic pemphigus is an affection which seems peculiar to new-born infants. Dr. Krauss published, in 1834, an interesting thesis on this affection, although it evidently embraces facts which do not belong to pemphigus. Dr. Paul Dubois has since observed many cases of this kind, and was the first to establish the syphilitic nature of the disease. In all the cases which he has collected he has established the previous existence of syphilis in the mother, and has seen characteristic ulcers under the bullæ. The disease is marked by the presence of several bullæ, varying in size, rarely exceeding that of a filbert, most frequently seated on the palms of the hands and soles of the feet, surrounded by a violet colored areola, and filled with a sero-purulent fluid. It is primary, and always fatal.

Syphilitic rupia is much more rare; it is characterized by large irregular bullæ, distended by a blackish liquid, followed by dark conical scabs, which cover deep and characteristic ulcers. This form is essentially secondary.*

Pustular syphilitic eruption.—This form is characterized by the presence of small elevations containing an ichorous or purulent matter. They are succeeded by greyish blotches, ulcers, or cicatrices. The history of this form of syphilitic eruption derives interest from the fact that almost all writers on this subject have described and confounded all venereal affections of the skin under the vague term of *pustules*, at the same time that the precise definition of this form of syphilitic disease is not even now very well understood by practitioners.

1. In one form, the pustules (*psydracious*) are either small and narrow; or of a large size, elevated, and round. They have a hard base, and are surrounded by a copper-colored areola. The pustules themselves are of a dull reddish hue, and are developed in successive crops, presenting examples of the disease in its origin, maturity, and decline. Their progress is slow, and the inflammation attending them moderate; in some cases, however, it destroys the true skin, and leaves behind it a small, white, circular scar, depressed in the centre,

* Rayer says that the *bullar* form of syphilis is very rare, but that a bullar areola forms around the base of a certain form of pustular syphilis, which is afterwards covered with a large, brownish, prominent scab, analogous to that of rupia. This corresponds with my own experience on the subject, and is probably what writers mean when they speak of syphilitic *rupia* as being of common occurrence. At the same time there is no doubt that a true syphilitic bullar disease does occur.
H. D. B.

and not larger than a pin's head. These scars, which have been erroneously supposed to follow papules because the affection has been confounded with a papular eruption, are, in a great majority of cases, the sequels of true pustules. This form chiefly occurs on the face and forehead, where it bears some resemblance to acne rosacea; but it may appear on every part of the surface. The pustules dry off, and form a small greyish scab, which separates, and may leave behind it either a cicatrix or some injection of the skin. The psydracious pustules rarely terminate in ulceration, and then only when several of them have become confluent.

When seated on the limbs these pustules present a different appearance. They are sometimes of the size of a lentil, quite numerous, and but slightly elevated above the surface, and with a hard base, and contain but a very small quantity of yellowish white matter, which presents a strong contrast to the copper-colored elevation on which it rests. They are not followed by ulcers; a thin scab forms on them, which is followed by a scar, or sometimes by a livid discoloration, or a small chronic induration.

This form of syphilitic eruption (called also *lenticular pustular* eruption) is the most common of all those which assume the pustular character, and is the one most frequently mistaken for the papular form, doubtless in consequence of the rapidity with which it passes into the purulent stages, and the persistence of the induration which so early follows, and also on account of the peculiar arrangement of the eruption, which is always spread over a large surface in isolated elevations. This explains why the papular form of syphilitic eruption has been erroneously regarded as the one of most frequent occurrence.

2. *Syphilitic impetigo.*—This form is usually preceded by slight malaise, and commences with redness of the affected points; this is followed by small collections of purulent matter, forming irregularly shaped patches, more or less confluent, resting upon surfaces of a coppery red color, which are soon covered by scabs irregular in shape, harder, darker colored, and more adherent than those of common impetigo. Beneath these scabs are characteristic ulcerations, which are followed by scars, varying in extent and shape. This is the form called *pustulo-crustaceous* syphilitic eruption. It may affect any part of the surface, but more frequently attacks the face. It sometimes appears on several places at the same time, but has no tendency to spread to neighboring parts. It is always secondary.

3. In the third variety of syphilitic pustular eruption, the

pustules are still larger (*ecthyma syphiliticum,*) and resemble those of ecthyma. They are few in number, isolated, and chiefly occur on the limbs, and especially the legs. They appear at first under the form of a large livid spot, about the size of a shilling, or larger; the epidermis is now raised over a considerable portion of the spot, by a greyish, sero-purulent matter; the elevation increases slowly, and is always surrounded by a broad copper-colored areola, quite different from that of ordinary ecthyma, which is of a violet red. After a few days the pustule breaks, and the contained matter concretes into a dark, hard scab, which gradually becomes thicker, and fissured at the edges, being of a circular shape. All this occurs without any local inflammation: there is little heat, and no pain; the scabs are extremely tenacious, and may remain for an indefinite time without separating. When they do come away, we find underneath them deep round ulcers, with sharp-cut hard edges, of a purple color, whilst the bottom is greyish and ill-looking. They have little tendency to spread; the scabs now gradually form again, and are frequently renewed, until, under the use of appropriate means, they become thinner, while the ulcers get clean and heal, leaving behind them circular and lasting cicatrices.

This is the most common form of the syphilitic pustular eruption, and the one which usually occurs in new-born children. Here the pustules are broad, superficial, flat, of an oval shape, and in great numbers; the scabs are dark and thick, and conceal small ulcers underneath. The countenance of the patient presents, at the same time, a peculiar appearance, which it is difficult to describe: the skin is of an earthy hue; the child is emaciated, the face is drawn in and marked, like that of an old person, by numerous wrinkles, while the whole body exhales a most disagreeable odor.

In some cases the skin, near the roots of the nails or underneath them, is the seat of syphilitic pustules, which ulcerate, discharge a sanious matter, and finally destroy the nail. The latter may grow again, but its appearance is spoiled. The ulcers heal, but the skin remains red, bleeds on the least touch, and is sometimes the seat of excessive pain. Pustular syphilis is most generally consecutive.

Tubercular syphilitic eruption.—This is one of the most frequent forms under which the venereal disease attacks the skin. It commences with tubercles of different sizes, and of oblong, flattened, or conical shape; they are of a red or copper-color, sometimes isolated, but generally agglomerated into patches of a circular form. They may remain indolent for an indefinite time, and are smooth or shining, or covered

with a slight epidermic exfoliation. In other cases the tubercles ulcerate, and the ulcers, which are covered by thick scabs, may destroy deeply the subjacent tissues, or spread more or less superficially along the skin.

Tubercular syphilis may occur in any part of the body, but chiefly attacks the face; and the cartilages of the nose or angles of the mouth are so frequently its seat, that a tubercle on these parts may almost be considered as pathognomonic of venereal infection. It likewise appears on the eyebrow or scalp, destroying the roots of the hair. We saw a patient in M. Biett's wards, the whole of whose body was covered by venereal tubercles. The following are the principal varieties of this form of syphilitic eruption.

1. *Tubercular syphilitic eruption in groups.*—In some cases the tubercles are small, not larger than a pin's head or a pea, rounded, and of a copper color; they are collected together into circles of various sizes. Each tubercle is surmounted by a small disc of exfoliated epidermis, which is hard and greyish, and does not entirely cover its summit; while the centre of each circle is entirely sound. Ulceration rarely occurs in this variety; the tubercles gradually subside and leave behind them a livid red spot, which also vanishes after some time. It is never primary, and principally shows itself on the forehead and neck.

2. *Disseminated tubercular syphilitic eruption.*—In the other cases the tubercles are larger and collected irregularly into groups; they are oval or pyriform, and very prominent, being sometimes as large as a small olive. Their summits are smooth, shining, and free from desquamation; they are unattended by pain, and may remain indolent for years together. They rarely, if ever, ulcerate. This variety is always secondary, and generally occupies the face, cheeks, or nose.

3. *Perforating tubercular syphilitic eruption.*—In a great number of cases, we find large, isolated, round tubercles, few in number, of a purple red tinge, and surrounded by a copper-colored areola, seated on the face, and especially on the upper lip or nose. These may remain stationary for some time, but at length become tense and painful; an erythematous blush surrounds them, of a peculiar deep violet color. The summit of the tubercle soon ulcerates deeply, and a thick scab is formed. Fresh tubercles now form in the neighborhood, progress rapidly, and the ulcers soon coalesce to give rise to a large, black, and extremely tenacious incrustation of matter. If the scab be removed, we find underneath an irregular ulcer, with cleanly cut edges, formed by indurated and engorged tissue of a purple color. The centre of the

ulcer is always more or less excavated. Fresh scabs now form, and as they are detached, we find the subjacent parts more and more destroyed. Thus the side of the nose or a portion of the lip is removed; the portion of tissue which remains is of a violet-red color, and always presents more or less of a circular form. In cases where the whole nose, with its bones and cartilages, has been destroyed, many of which we have seen at St. Louis, the disease almost always commences in the hard parts, and destroys from within outwards. This form is always consecutive.

4. *Serpiginous Tubercular Syphilitic Eruption.*—In the fourth variety we have tubercles sometimes as large as a hazel-nut, hard, round, and of a red color, scattered over different parts of the body, but generally seated on the back. They are not covered by scales, and may remain stationary for a considerable time; finally, however, they ulcerate, and the ulcers extend from them to the neighboring tissues, which they destroy in a curious manner. They describe circles or segments of circles, spirals, zig-zags, figures of all kinds, &c., are superficial, and generally a few lines broad only. They are covered by thick, hard, black, and very tenacious scabs, and when they heal leave irregular scars, which are never got rid of. In the majority of cases new tubercles are constantly appearing, and the ulceration passes from one to another, healing in one place, while it breaks out elsewhere. We saw a patient in M. Biett's wards covered from head to foot with tubercles of this kind; the face, the scalp, arms, and back were traversed by long irregular scars, spotted with large red tubercles, and every now and then the diseased parts were the seat of serpiginous ulcers concealed under thick scabs. This variety is always a secondary affection.

5. *Syphilitic Eruptions with flat Tubercles.*—Finally, we have a variety of tubercular syphilis, which is sometimes a primary symptom. Here the tubercles are round, thick, and flat, and perforated on the top by small linear ulcers. The tubercles are occasionally as small as lentils, at other times thick, of a deep livid red color, and as large at the base as a shilling; the former are found chiefly on the sides of the nose and lips; the latter on the scrotum, penis, pubes, thighs, and anus. The summit of the tubercle soon ulcerates, and presents the appearance of a narrow slit, from which a sanious, fœtid matter is discharged. The whole scrotum is sometimes covered by these tubercles; they are isolated, perfectly round, and very prominent. Around the margin of the anus they may coalesce, and form larger surfaces, but the ulceration is

always superficial. This form is most frequently secondary.*

Papular Syphilitic Eruption.—This consists in the eruption of small elevated points, which are hard and solid, contain no fluid, and terminate in resolution or desquamation; but never ulcerate. The papular syphilitic eruption may be acute or chronic.

In the first variety (*lichen syphiliticus; scabies venerea*), the papulæ are exceedingly minute, slightly conical, and often in immense numbers; they are of a copper color, and the deep areola which surrounds them sometimes gives the skin the appearance of a large copper plate sprinkled with a number of elevated points a little less deep in color. They often coexist with gonorrhœa, or come out soon after its disappearance, a circumstance which confirms the opinions of Mr. Carmichael. The papulæ usually occupy the whole of the body, and especially the face, coming out within the space of twenty-four or forty-eight hours. Generally speaking, there are no constitutional symptoms, but we have sometimes seen them preceded by headache and some fever, and attended with pretty smart itching.

This is one of the least formidable varieties of syphilitic diseases of the skin. Bateman says that the papulæ sometimes ulcerate, and certain writers even go so far as to say that if left to themselves, they always end in ulceration and the formation of purple-colored scars. This is clearly an error. When abandoned to nature, they often disappear in a short time after slight desquamation. Ulceration of the point of the papule may sometimes occur, as it does in *lichen agrius;* but this is exceedingly rare, and when it does happen, the ulcer leaves no cicatrix behind it. But it is worthy of note, that occasionally the papules are followed by small cica-

* This form of eruption, which is most commonly but erroneously called *mucous pustule*, and sometimes *mucous tubercle*, and which Ricord proposes to call "*plaque*" or "*papule muqueuse*," is considered by him as the prototype of papular syphilis, and as "*incontrovertible evidence of constitutional infection.*" He says that "it begins by a papule, formed on one of those portions of the skin where its texture is thinner, more vascular, and more abundantly furnished with sebaceous follicles; also where habitual friction has modified more or less the tissue, so as to render it analogous to mucous membrane, as the anus, groin, fold between the penis and scrotum, umbilicus, meatus auditorius externus, axilla," &c. He says that "a remarkable degree of symmetry is observable in its development on both sides of the body, even when contact does not exist." Gibert gives a case (*Mém. de l'Acad. Roy.* v. x., 1843) in which it occurred on the internal surface of the lower eyelid, of which he had seen but one case besides. He says that this form of eruption is sometimes a primary and sometimes a secondary symptom. It is a symptom which, of all others, may happen the soonest, and may even appear on the seat of the primary sore. H. D. B.

trices, without having been preceded by ulceration. Most usually, however, the eruption fades at the end of a few days, with slight desquamation, leaving only small stains, which soon disappear.

The second variety of syphilitic papular eruption is a chronic affection; the papulæ are large, flat, and of a copper color, very prominent, and of a regular circular shape. They first appear as small yellow points, which gradually rise into indolent papulæ, without areolæ; they are commonly collected together in great numbers, free from itching, and the intervening skin is of a dirty and faded appearance. They chiefly occur on the limbs, in the line of extension, the forehead and hairy scalp. In all cases they are a secondary symptom, and generally accompany other constitutional signs of the disease, especially pustules. They commonly terminate in the following manner: The summit of each papule is covered by a dry, greyish pellicle; this falls off, and is perpetually renewed, until the papulæ sink to the level of the skin, leaving nothing but a greyish white spot, which persists for a considerable time. When the eruption is very thick, the desquamation is sometimes so abundant as, at the first glance, very much to resemble a *scaly* affection.

Scaly Syphilitic Eruption.—Sometimes the skin is the seat of small copper-colored elevations, covered by scales, &c.; these we have referred to scaly affections, and divided into several varieties. This form is always consecutive, and usually of very long duration. It terminates by resolution and desquamation, never by ulceration; and never leaves scars.

1. *Syphilitic Lepra.*—One of the most remarkable forms of this eruption is that in which the spots, analogous to those of lepra, are of a deep grey, almost black color; this probably has often been described as a variety of simple lepra (*lepra nigricans*). It is a very rare complaint, but we once had an opportunity of observing a curious example of it in the wards of M. Biett at St. Louis, in a patient in whom the eruption disappeared under the influence of abdominal irritation, and again appeared, so well marked that we could trace its development very satisfactorily.

The leprous spots, in this case, were perfectly round, from two or three lines to six or eight in diameter; they were raised at the edges and depressed at the centre, and were of a very dark color, especially in the centre. The scales were thin, dry, friable, and but slightly adherent; underneath them the elevated surfaces were smooth and shining. The affection gradually disappeared under the influence of an internal

inflammation; the scales ceased to be formed; the edges of the leprous spots subsided, and at length nothing remained but a dark round stain. At the expiration of six weeks, the internal disease was cured, and the cutaneous affection broke out afresh; the leprous spots commenced in the centre of the old ones, and soon assumed their original appearance; the elevated points which subsequently constituted the spot were not of the same color at first as the stain in which they formed, but were of a coppery-red color; a few discs appeared on the healthy skin, and here they were not preceded by a deep red spot, as is the case in lepra, but by a greyish injection of the skin, without heat or itching. The skin, in the intervals, was of a dirty hue, and the patient emitted a very peculiar smell.

Syphilitic lepra may be general, as in the case just mentioned; it is very seldom a primary symptom, though M. Biett used to mention a remarkable case in his clinical lectures, where it broke out a short time after unclean connexion.

2. In the majority of cases this form assumes the characters of *psoriasis*, and most usually of *P. guttata*. The spots may be confined to one region of the body, but they generally occupy the neck, back, chest, and abdomen at the same time, or the limbs, face, and scalp. They vary in size from the diameter of a farthing to that of a half crown piece; they are generally isolated and irregularly circular, a little elevated above the surface, and covered by thin, hard, greyish, tenacious scales, which fall off and expose a smooth, shining surface, of a coppery tint, unlike the red, fissured elevations of psoriasis. Even when more allied to P. guttata, they present a peculiar appearance, which M. Biett considers as pathognomonic; this is a small, white border, surrounding the base of each disc at the point where it commences to rise above the level of the skin, and evidently produced by laceration of the epidermis. Some writers pretend that this is a sign of little importance, inasmuch as it is common to other cutaneous affections, as in vesicular eruptions, and especially in varicella; but these assertions are erroneous. The venereal border adheres firmly to the circumference of the spot, which is not the case in varicella.

In some cases several spots coalesce, and form a large copper-colored discoloration, covered here and there with scales, which fall off, and are reproduced slowly. The disease generally commences on the arms, whence it extends to the chest, back, and face; the first thing seen being small copper-colored points, which cause considerable itching,

extend gradually, and as they become elevated, are covered by scales.

3. *Horny scaly syphilitic eruption.*—Finally, this form of scaly syphilitic eruption appears on the soles of the feet or palms of the hands, in the variety denominated by M. Biett the *horny*. It commences by slightly elevated points of a copper color; these are elevated in the centre, and covered by greyish, hard, fissured scales, which become very numerous, and as they coalesce form a kind of spot, divided by crevices or fissures. M. Biett has termed this variety *horny*, from the horny, cylindrical substance which in old cases occupies the centre of the spot. It very rarely exists alone, but is generally accompanied by other symptoms of constitutional syphilis.*

The various forms of syphilitic eruption just described may occur together in the same individual. Thus papulæ often exist with pustules, and the latter with tubercles. In general the scaly forms occur without complication of any other, but, like the rest, are almost always attended by constitutional symptoms of syphilitic infection.

Concurrent symptoms.—The cutaneous forms of syphilis may be complicated with all the other symptoms of that disease, but we shall confine ourselves at present to such as most frequently coexist with syphilitic eruptions.

The most common are ulcerations of the throat, amygdalæ, or posterior part of the pharynx, easily recognised by their peculiar form and appearance, and which consist, as Hunter says, in a real loss of substance, as if a part of the tonsil or of the mucous membrane of the pharynx had been removed, presenting regular edges and an excavated centre, covered with very adherent greyish matter. Next come pains in the bones, inflammation of the periosteum or exostosis. These chiefly occur in the superficial bones, as the tibia, ulna, and bones of the cranium. Hunter thought that this tendency depends on the exposure of such parts to cold, but more recently these affections have been attributed to the use of

* When *scaly* syphilis appears on the parts where the skin is in contact with itself, the surfaces of the spots become soft, and are moistened by a whitish matter, which is fœtid and oily, and instead of scales are covered by a smooth epidermis, of a dull white or greyish color.—(*Rayer Mal. de la peau.*)

It sometimes appears on the *tongue*, and then presents itself in the form of slightly depressed patches, irregularly oval in shape, with their long diameter from a quarter to a third of an inch in length, and parallel with the length of the tongue, smooth and glossy, of a dull or coppery-red color, and destitute of villi or epithelium, with small intervals of sound surface between them. Several of these patches may exist at the same time. They cause little or no uneasiness, and frequently heal up in a short time, though liable to reappear. H. D. B.

mercury: the latter opinion does not seem to be correct; since the year 1816 M. Biett has seen every year from five to six hundred persons who, in consequence of their peculiar occupations, were literally saturated with mercury, yet he never witnessed any disease of the bones or exostosis amongst these individuals.

A frequent attendant symptom of venereal eruptions is *iritis*, the syphilitic nature of which has been established by Saunders, Wardrop, and more recently by Lawrence. The importance of this complication induces us to say a few words on it. Iritis commences with violent pain in the head, followed by dull, deep pain in the eyeball, increased on the admission of light: the pupil now contracts uniformly, and the movements of the iris are gradually impeded; its circular fibres assume a deeper or a reddish tint, and the edge of the iris loses its regular appearance. At a later stage the pupillary margin becomes angular, the iris is tumefied, and advances towards the cornea; small abscesses form and open into the anterior chamber, and unless the disease be arrested, it makes a rapid progress: the inflammation extends on one side to the capsule of the lens, which gradually loses its transparency; while on the other the cornea becomes opaque, and coagulable lymph is effused, causing adherences which may be altogether fatal to vision.

Another attendant symptom of syphilitic eruptions, is the tumor denominated *gummy* by some pathologists, and to which M. Biett has particularly directed attention in his clinical lectures. These tumors appear to spring from the laminated tissue underneath the skin; the first symptoms are a slight uneasiness and elevation of the affected part, with a livid tinge of the integument, but when the tumor is deep-seated the skin may retain its natural color. The progress of the disease is slow; the tumor gradually becomes more prominent and the color more livid, especially over the point where it is about to give way; and then some obscure fluctuation is perceived. The tumor may terminate in resolution, and of this M. Biett mentions a remarkable example; but more frequently the skin gives way, the edges of the fissures are lacerated, and in two or three days a large venereal ulcer, with its clean cut edges, appears.

Such are the constitutional symptoms which commonly coexist with venereal affections of the skin; but there are many others of a similar nature, or unconnected with syphilis. Thus the patient may be cut off by ulceration of the bowels; or erysipelas may ensue on syphilitic eruption of the face, when the latter disappears for a time. Lastly, they may be

accompanied by ozœna, destruction of the cartilages of the ears, scirrhous enlargement of the testicles, or inflammations of various organs, by which the progress of the cutaneous affection is more or less modified. They may be complicated with non-syphilitic eruptions, as eczema, herpes, and particularly the itch. They often cause baldness. Different elementary forms of eruption may also appear at the same time, as papulæ with pustules or tubercles. The scaly form is found most frequently alone.

Pathology.—Patients are never cut off by the cutaneous affection itself, although they sometimes sink under the constitutional symptoms which may accompany it. The post-mortem researches of M. Biett have disclosed a great variety of lesions—necrosis, exostosis, caries of the bones of the foot, &c., and fistulæ. In one patient, who died with all the symptoms of laryngeal phthisis, he found ulceration of the mucous lining of the larynx, with caries of its cartilages, and a fistulous canal opening externally. In other cases he has found peculiar ulcerations of the intestinal canal, and chiefly near the cœcal valve. An effusion of serum also frequently exists in some of the great splanchnic cavities. Most of the bodies of those who die with these symptoms have a peculiar and fœtid odor, and decompose very rapidly.

Causes.—Syphilitic diseases of the skin may be excited by a great number of occasional causes, such as severe exercise, excess in eating, violent passions, an attack of fever, irritating applications, active medicines, wounds, contusions, &c. Sometimes it is impossible to discover any exciting cause, but in every case the remote and invariable cause is syphilitic infection. Under certain circumstances they are clearly contagious, and may be transmitted from parent to child; infants are occasionally born with syphilitic pustules, or the eruption may break out shortly after birth. In other cases the infant contracts the cutaneous affection from its nurse; or an apparently healthy infant, if born of a mother laboring under the disease, may communicate it to a perfectly healthy nurse.

The cutaneous affection, however, in the majority of cases, breaks forth without any appreciable cause, and while the individual seems in the enjoyment of the best health; but it may be excited by mental emotion, excess of any kind, or the influence of another disease; sometimes it is preceded by general derangement of the economy, or headache, depression, febrile languor, &c. Experience proves that it may succeed gonorrhœa, as well as chancre and bubo, and *vice versa*.

The relation between any particular form of primary symptoms and a particular form of eruption, which Mr. Carmichael

endeavored to establish, is not sustained by facts. The form of the primary disease has no influence upon that of the eruption which succeeds it.

Age has no effect upon the appearance of syphilitic eruptions; they are of more frequent occurrence from twenty to thirty years of age, because the primary disease is most common at this period.

Cold is more apt to act as a predisposing cause of these eruptions than heat.

Facts seem to prove that they occur much less frequently after a mercurial course of treatment than after simple treatment alone.

Diagnosis.—Although the characters of syphilitic eruptions are clearly marked, they are often overlooked, or mistaken for other diseases of the skin. Their symptoms, however, are very distinct, and the experienced eye will seldom fail to detect a certain *ensemble*, which is difficult to describe, depending on the peculiar color and arrangement of the eruption, and general state of the patient. We cannot, as some pathologists pretend, place any reliance on the influence or failure of mercury as a diagnostic sign.

1. The disease most likely to be confounded with *syphilitic exanthematous affections* of the skin, are roseola, urticaria, and ephelis; the two former bearing some resemblance to acute, the latter to chronic exanthematous syphilitic eruption.

Roseola.—This affection differs from the greyish spots of the syphilitic variety in its color, which is light red, and in the general symptoms accompanying it. The progress of syphilitic roseola is quite different from that of the simple disease; but we should not forget that at an early stage of the exanthema the spots present a reddish instead of a copper color; as the disease advances they assume a deeper tint, while in common roseola they gradually fade, and soon disappear altogether.

Urticaria.—The small spots of urticaria, arising without any apparent cause and attended with itching, bear some resemblance to acute exanthematous syphilide; but the color of the spots is different in the two affections; in the former they are either whiter or more red than the healthy skin, never of the grey color peculiar to the syphilitic eruption; they are likewise more elevated, and attended with greater itching; finally, they disappear suddenly and break out again after some time, a circumstance which never occurs in the syphilitic variety. Acute exanthematous syphilitic eruption almost always accompanies gonorrhœa or primary venereal symptoms, or at least appears very soon after their cessation.

Ephelis.—The ephelides differ from syphilitic blotches in several respects; they are usually larger and irregular in form, occupying a more extensive surface of the body, and particularly the abdomen and chest. Syphilitic spots, on the contrary, are round, and seldom larger than a half crown piece; they are generally few in number, and chiefly seated on the forehead, face, or eyebrows. Ephelides are of a yellow color, covered by a furfuraceous exfoliation, and attended with some itching. Venereal spots are of a red copper tinge, occasion very slight if any pruritus, and are rarely covered by epidermic scales. Finally, they never coalesce, like the ephelides, to form irregular discolorations which may cover a very large portion of the body.

Syphilitic maculæ are almost always accompanied by some other venereal symptoms, and are often complicated with iritis.

Elephantiasis Græcorum.—Syphilitic maculæ may be confounded with this disease at its commencement. But in elephantiasis, the spots are of fawn color; the skin is smooth and shining, and there is insensibility of the spots, which is pathognomonic of this disease. The history of the case will also afford aid in the diagnosis; and in the case of elephantiasis, it can always be traced to the country where it is endemic.

2. *Vesicular syphilitic eruption* is especially characterized by the persistence of the individual vesicles, the copper-colored areola about their base, their number and arrangement, which distinguish it entirely from varicella and eczema. In the impetiginous variety, the syphilitic form is known by the adherence and dryness of the scabs, the ulcerations, &c. The coppery color of the syphilitic form, which extends to the centre of the patches, will distinguish it from herpes circinatus.

3. The *pustular syphilitic* eruption may be confounded with acne and ecthyma.

Acne.—The pustules of acne, especially those seated in the forehead and face, resemble psydracious syphilitic pustules, but they are more prominent, red, and surrounded occasionally by an erythematous areola, whereas the latter are of a purple color and inclosed by a copper-colored circle. The intervening portions of skin in acne are red, shining, of a greasy appearance, and covered with small dark points; in the venereal eruption they are of an earthy hue and faded appearance. Finally, the syphilitic pustules are often succeeded by small scars, which seldom occur except in cases of *acne indurata*, where the cicatrices are of a different character, being oblong in acne and round in the syphilitic disease.

Ecthyma.—It is sometimes exceedingly difficult to distinguish phlyzacious syphilitic pustules from those of ecthyma; but the areola of ecthymatous pustules is of a purple-red color, while in syphilis it is always copper colored. The incrustations of the latter are thicker and more tenacious, and sometimes almost black; they are, likewise, fissured all round the edges; the ulcers which follow them are round and deep; their edges perpendicular, &c., and they constantly produce depressed and indelible scars. Finally, they are usually attended by other signs of constitutional syphilis.

4. *Tubercular Syphilitic Eruption.*—The cutaneous diseases likely to be confounded with tubercular syphilis are lepra, some varieties of psoriasis, acne indurata, and lupus.

Lepra.—In the syphilitic affection, although the spots are sometimes circular, they are never so completely so as in lepra; they are formed by isolated, smooth, prominent tubercles of a purplish or copper color, covered by thin, hard lamellæ, which are always smaller than the subjacent induration; the scales of lepra are larger, and cover the edges of the spot, its centre, or even the whole of it.

Psoriasis gyrata.—Tubercular syphilis, partially cured and presenting imperfect circles, has often been mistaken for psoriasis gyrata; but the points of difference which apply to lepra, will serve as means of distinguishing it from this affection likewise.

Psoriasis guttata.—It seems certain that tubercular syphilis of the scrotum has been frequently confounded with P. guttata, which is but seldom seen on that part; but the former is characterized by round, thick, flat tubercles, which ulcerate at their summits, and discharge a sanious and very fœtid matter; while in the latter disease we have merely dry eminences of a papular appearance, which are covered by scales of various sizes, but never terminate in ulceration.

Acne Indurata.—This variety of acne may be followed by circumscribed indurations, which occasionally resemble those of syphilis in being separated by a number of cicatrices; but the tubercles of the venereal affection are hard, copper-colored, round, and often as large as hazel nuts; they have not, like the circumscribed indurations of acne, been preceded by pustules; they frequently ulcerate and burrow underneath the skin to a considerable extent, are covered by thick scabs, and leave behind them, not the oblong cicatrices of acne, but irregular tortuous scars.

Lupus.—It is sometimes no easy matter to distinguish the nascent tubercles of lupus from those of tubercular syphilis. Those of lupus, however, are reddish, soft, and but little

developed; they are fissured or shrivelled at the summit; the adjacent skin is slightly œdematous; the tubercles of syphilis are more prominent and harder; smooth, shining, and of a copper color. Lupus generally commences on the cheeks, while the venereal tubercle most frequently attacks the forehead or sides of the nose. Finally, lupus occurs mostly in individuals of scrofulous habit and young persons of lax fibre, while the venereal tubercle is usually found in adults, and is, besides, almost always attended by other signs of constitutional syphilis.

5. *Papular Syphilitic Eruption.*—This variety should be distinguished from lichen and scabies.

Scabies.—The syphilitic papular eruption is sometimes very small, slightly conical, and, if some writers are to be credited, presents the transparent serous collections so characteristic of scabies; but the least attention will suffice to show that the disease is a papular and not a vesicular one.

Lichen.—Syphilitic lichen may be distinguished from *lichen simplex* by the following signs: The papulæ of the former are very small and numerous, slightly conical, of a deep color, and the areolæ sometimes coalesce to form a large copper-colored blotch, dotted with fine points; in lichen simplex the eruption is generally confined to a single region of the body, particularly to the limbs; in the syphilitic variety it covers the whole body, is most abundant on the face, and the papulæ make their appearance nearly at the same time in the different regions.*

In some cases of syphilitic papulæ, the papules are flattened, broad, and covered by small scales, which conceal the intervening healthy spaces, and give the disease some resemblance to the *scaly* variety; but the two forms now spoken of could only be confounded at a particular period of the disease; in its early stage the papulæ are perfectly distinct, and at a later period are again easily recognised, when the scales have fallen off; the progress of the eruption, then, will sufficiently demonstrate its nature.

6. *Scaly Syphilitic Eruption.*—The diseases from which this form should be distinguished are psoriasis and lepra.

Lepra.—When the edges of the scaly syphilitic eruption are prominent, and the centre of the spot depressed, it may be mistaken for *lepra*, as the only diagnostic mark is its coppery color; in *lepra nigricans* the very dark color of the spots is quite characteristic.

* *Lichen simplex* is most commonly accompanied by itching, which is sometimes quite severe; *syphilitic lichen* itches but little, if at all. H. D. B.

Psoriasis.—The syphilitic cutaneous affection may occasionally simulate *psoriasis*, and especially *psoriasis guttata;* in the former, however, the color is coppery; the spots are covered by small, thin, grey scales, which are much thinner than those of psoriasis; and finally, they are surrounded by the white rim altogether peculiar to them.

Such are the different affections which more or less resemble syphilitic diseases of the skin: we may add, that in addition to their distinctive characters, the latter are generally attended by certain constitutional symptoms, the presence of which is of much aid in a diagnostic point of view. It remains for us to say a few words on two conditions sometimes attending cutaneous diseases, and giving them some resemblance to analogous affections of syphilitic origin: these are incrustations and ulcers.

7. The *incrustations* of syphilitic pustules or tubercles may be mistaken for the scabs of *impetigo:* but the latter are yellow and easily detached; while those of syphilis are greenish or nearly black, hard, and in all cases excessively tenacious, penetrating more or less deeply into the skin.

8. Syphilitic *ulcers* may resemble those of *lupus*, but if we remember their peculiar characters, we cannot easily confound them. The venereal ulcer is deep and excavated, its edges hard, cleanly cut, and surrounded by a copper-colored areola; the ulcer produced by lupus is more superficial, its edges soft and violet color; the surrounding skin is generally engorged, and, as it were, œdematous. When lupus spreads, its ulcerations do not assume those spiral or zigzag forms which characterize *serpiginous* syphilitic ulcers. But when the diseases are confined to a small portion of the body, the nose for example, and destroy the parts on which they have fixed, it is not so easy to distinguish them. We should remember, however, that in lupus the destructive process almost always commences in the skin, while in syphilis it has its origin in the bones; in the latter it is much more rapid, and finally is attended, as we have so frequently observed before, by other constitutional symptoms.

Prognosis.—Syphilitic diseases of the skin are seldom dangerous. The tubercular, and some varieties of the pustular form, are the most severe; the scaly eruption is often very obstinate; all the rest are, generally speaking, of shorter duration. The prognosis is less favorable when the patient has long suffered under syphilis, or been the subject of several relapses, and when the cutaneous affection is complicated by several other constitutional symptoms. In the latter case, the patient may sink into the most frightful state; the pulse becomes

weak, the face loses its color; diarrhœa sets in; blood is discharged from the nostrils, and death ensues.

Treatment.—It were useless to enumerate the long list of remedies which have been employed in the treatment of constitutional syphilitic affections; we shall, therefore, confine ourselves to a consideration of those, the utility of which has been demonstrated by experience.

The antiphlogistic method, and the use of emollients, have been vaunted as sufficient to effect a cure in the majority of cases; but from considerable experience we must say: 1st, that they are often useful, and occasionally indispensable as auxiliaries; 2d, that sometimes, though very rarely, they will effect a cure; 3d, that in the immense majority of cases they fail, except in acute papular or exanthematous syphilide, which are in general temporary eruptions, appearing and disappearing with the primary symptoms.

In the treatment of syphilitic eruptions, both *internal* and *external* remedies are used.

The remedies sanctioned by long experience are the following:

Mercury.—The preparations of mercury are, beyond doubt, the most useful remedies that we possess against syphilitic diseases of the skin; though sometimes unsuccessful, they answer our fullest expectations in a great majority of cases, and it seems probable that their occasional failure may depend on the manner in which they have been administered. Thus, mercury ought never to be given in the acute stage of a syphilitic disease of the skin. It is impossible to lay down any positive rules for the quantity that should be administered, this depending on the patient's constitution, the nature of the symptoms, the effects of the medicine, &c. We may employ *Van Swieten's solution*, or pills composed of *corrosive sublimate* and *opium*. When the patient is weak and irritable, and it is expedient to avoid excitement of the digestive apparatus, we may have recourse to the *soluble mercury* of Hanhemann, in the dose of a grain daily. Among preparations of this article, the *protochloride of mercury*, although sometimes too mild, has often a very good effect in certain cases of affection of the pituitary membrane, used by insufflation; and the *bichloride of mercury*, a very efficacious remedy in venereal eruptions, but which is apt to disagree with patients; and especially the *proto-iodide of mercury*, introduced into practice by M. Biett, and which time and experience have proved to be, at present, the best article for the treatment of syphilitic eruptions.

When carefully administered, mercury seldom produces

any injurious effects; still, we must keep a watchful eye on the state of the digestive organs during its use, and suspend it if symptoms of irritation supervene. The time during which it is to be employed must depend on the effects of the remedy; but we cannot agree with some writers, that the treatment should be continued for a month or longer after the disappearance of the symptoms, with a view to preventing a relapse.*

Sudorifics.—This class of remedies is of much value, in combination with other means of a more active nature. The sudorifics generally employed are the decoctions of guaiacum, sarsaparilla, and mezereon; an ounce of the sudorific syrup may be added to the first dose of the remedy, taken in the morning before eating.

Tizan of Feltz.—This occasionally succeeds in cases where mercury fails; the patient may take two or three glasses a day.

Muriate of Gold.—This preparation has been highly spoken of, but its advantages have been greatly overrated; we have seldom seen it succeed. A tenth of a grain may be applied in friction on the tongue twice a day.

Subcarbonate of Ammonia.—A speedy cure has been sometimes obtained through means of this remedy, especially in cases where mercurial preparations fail. M. Biett was in the habit of commencing with a drachm, in some mucilaginous fluid, and gradually increasing the dose to two or three drachms during the day.

Acids.—M. Biett frequently administered nitric and sulphuric acids with benefit in certain forms of syphilitic disease of the skin. We have often seen simple cases, syphilitic roseola for example, cured in this way; and even inveterate cases, especially some forms of the pustular eruption, will

* Gibert says that the mean duration of this treatment has not exceeded five weeks, but that he considers it prudent, as a general rule, to continue it longer, and usually does so in private practice. (*Mém. de l'Acad. Roy.*, vol. x., 1843.)

Cazenave himself, in another place (*Traité des Syphilides*, Paris, 1843), says that if the eruption is slight, and it disappears at the end of a month or six weeks, the treatment must be continued a month longer, diminishing the doses by gradually decreasing one third of the whole quantity. When the treatment is long, the patient may be allowed intervals of rest of fifteen days at a time. Rayer recommends a continuance of the treatment for fifteen days and even a month after the entire disappearance of the symptoms. Others recommend its continuance for two months in ordinary cases, and three or four months in severe ones. I have always advised the continuance of treatment from three or four to six or eight weeks after the disappearance of the eruption, giving the remedy in diminishing doses, and at gradually increasing intervals of time, and have also urged the importance of attention to regimen, more or less severe, for a still longer period. H. D. B.

sometimes yield to the acids after having resisted much more active remedies.

Iodide of Potassium.—This article has of late years been highly praised as a remedy for secondary syphilis; still, when used alone, it is less efficacious than the proto-iodide of mercury; but is exceedingly valuable when the system is suffering under syphilitic cachexia.

The internal treatment will occasionally require the aid of external medication. Thus the resolution of syphilitic tubercles may be assisted by the use of ointments containing the *proto-nitrate, proto-iodide, deuto-iodide* of *mercury*. Gentle inunction should be made with the finger over the largest tubercles. The most efficacious ointment, however, is one composed of twenty or thirty grains of the *iodide of sulphur* to an ounce of lard. We saw M. Biett employ this remedy with good effect in a case where nearly the whole body was covered by scars and large tubercles. As for the different lotions recommended by some writers, we reject them altogether; they are either useless or injurious.

The venereal ulcer may sometimes require a mode of treatment especially suited to it; thus it may be necessary to arrest the destructive progress of the sore, or modify its condition by the use of an ointment, containing the *deutoxide, deuto-iodide,* or *cyanuret of mercury*. In other cases we may be compelled to cauterize with the *binitrate of mercury;* and M. Biett often succeeded in alleviating the severe pain attending these ulcers, with small pledgets of lint smeared with the *hydrocyanic cerate.**

The remedies just mentioned will receive powerful aid in the proper administration of baths, &c. Thus, alkaline baths are beneficial in most cases of venereal pustular eruption; and the resolution of tubercles is considerably aided by directing a vapor douche for twelve or fifteen minutes over the affected parts. Vapor baths contribute in no small degree to the cure of scaly syphilitic eruptions. The flat pustules of Cullerier, which so frequently appear on the scrotum and round the margin of the anus, generally yield to the use of fumigations with cinnabar.†

* One of the best applications for ulcers which are painful and disposed to spread, I have found to be an ointment of white or red precipitate, of the strength of half a drachm to an ounce of opiated cerate or stramonium ointment, and sometimes with the addition of a few drops of tincture of opium. H. D. B.

† In addition to constitutional treatment, M. Ricord recommends for these flat pustules a lotion of one part of chloride of soda to four of water, to be used three or four times daily; the parts are then to be dried and well sprinkled with dry calomel. I have used black wash for them with advantage. H. D. B.

Several experiments have been recently made with baths containing corrosive sublimate; but we do not think that they have been conducted with sufficient care to draw any conclusions from them. The corrosive sublimate was generally added to water containing a quantity of alkaline salts, and must necessarily have undergone some change; besides, the action of the remedy, when administered in this way, must be extremely variable, and, in some cases, not unattended by danger. Our own experience thus far authorizes us in regarding this mode of treatment as always inefficacious, and as possibly dangerous.

Under certain circumstances which, unfortunately, are not very rare, syphilitic diseases of the skin resist all the modes of treatment just pointed out, and become complicated by alarming symptoms of constitutional infection. In such cases we have seen the best effects produced by the administration of opium, commencing with half a grain in the day, and gradually carried (by increasing the dose every three or four days by half a grain) to four grains, or even more, daily. Under the use of this powerful remedy, the symptoms often improve in a very rapid manner, and the most inveterate affections are completely removed.

Finally, in some cases, where the resources of the regular practitioner are exhausted, the disease has rapidly yielded to empirical remedies. Of this we have seen many remarkable examples in the wards of M. Biett, particularly with the decoctions bearing the names of Zittman and Arnault. The work of M. Lagneau contains full information relative to the method of Zittman; and the composition of his decoction will be found in our formulary. We are far from recommending these empirical modes of treatment; but we must acknowledge that we have seen them succeed in the most desperate cases, where every other remedy had been tried in vain. The decoction of Zittman sometimes produces diarrhœa, which compels us to suspend its administration for a short time; but, in the majority of cases in which we have seen it tried, the patients bore it well enough; and it was almost invariably successful, even in the most desperate cases.

The symptoms attending syphilitic eruptions will, of course, require special treatment. In ulceration of the throat, palate, &c., we may employ, with advantage, gargles containing the deuto-chloride of mercury and a few drops of laudanum. In *iritis*, general and local bleeding will often be requisite; but calomel, in large doses, as recommended by English writers, is the remedy which we have found most efficacious. When

an infant at the breast is attacked, the nurse should take *Van Swieten's* solution, or what is still better, employ frictions with the Neapolitan ointment and camphor over the legs and thighs. Should the nurse be too weak to undergo a course of mercury, the infant must be fed with the milk of a goat, treated in a similar manner. We have seen the best effects produced by this mode of treatment, at the dispensary attached to the Hospital of St. Louis.*

* The *proto-iodide* and *deuto-iodide* of mercury are both very valuable forms of this remedy, in different varieties of syphilitic cutaneous disease, especially when there is any tendency to the strumous diathesis; and it is in patients of this diathesis that syphilis is apt to make its greatest ravages, and to prove most intractable to remedies.

The *proto-iodide* may be given in pill, with extract of conium, beginning with half a grain of the former and one grain of the latter, morning and evening, and the quantity of the proto-iodide may be increased, giving a pill of this kind three times daily, or by giving a pill night and morning, containing one grain each of these articles. The quantity may afterwards be varied to suit the particular case, and may then be gradually diminished until a pill is given at night only. I have also given this remedy, with very satisfactory results, in combination with conium, in the fluid extract of sarsaparilla, either alone or combined with the fluid extract of rumex acutus.

The *deuto-iodide* may be given in pill, in doses of a sixteenth to an eighth of a grain, two or three times a day, or much better in combination with the iodide of potassium, in simple sirup or sirup of sarsaparilla—one eighth of a grain of the deuto-iodide and five grains of the iodide in half an ounce of the sirup. M. Gibert is very partial to its use in this way. It may also be given in combination with the iodide of arsenic and conium, forming a combination similar in its nature and effects to Donovan's liquor, already spoken of, and is thought, in this form, to be particularly adapted to eruptions of the *squamous* kind, which are well known to be among the most obstinate of this class. Mr. Erichsen speaks highly of a pill consisting of one twelfth of a grain of iodide of arsenic, one sixth of a grain of deuto-iodide of mercury, and two grains of extract of conium, to be given night and morning.—(*Lond. Med. Gaz., May*, 1843.)

The *bichloride* of mercury is better suited to some cases than either of the iodides, from the greater control which it seems to exercise over the capillary circulation. This may be given in pill, with extract of conium, or with opium and guaiacum, or in solution in alcohol, or, as I have preferred giving it, in some bitter tincture, as tinct. cinchon. comp., or tinct. gentian. comp., to which may often be added with advantage the tincture of capsicum—giving from one eighth to one fourth of the bichloride and a teaspoonful of the bitter tincture at a dose. In broken down constitutions, or in cases a long time under treatment, M. Gibert gives a mixture of one quarter of a grain of the bichloride, and eight grains of common salt, sprinkled on a fresh egg, and considers this as one of the best forms of administering this remedy to prevent salivation and pain in the epigastrium.—(*Gaz. des Hôp., Jan.* 8, 1850.)

When the disease resists the use of these remedies, M. Gibert has recourse to a modification of mercurial frictions, proposed by Dr. Scatigna of Naples, which consists in placing in the hollow of the axillæ of the patient a drachm of strong mercurial ointment. This is repeated the next day, and omitted on the third day, when the patient takes a bath, after which the plan is recommenced. M. Gibert saw a case of *tubercular* syphilitic eruption cured by this method, which had resisted other means for three years: some salivation was produced by it.—(*Mal. de la peau, Paris*, 1840.)

Whatever form of mercury is used, salivation must not be sought for but avoided, as it rather interferes with than promotes its good effects, as a general rule.

PURPURA.

SYN.—*Hæmorrhæa petechialis; Petechia; Morbus maculosus hæmorrhagicus; Hemorrhée;* Land scurvy.

Purpura is a disease of the skin, characterized by patches of a bright red or deep violet tint, of variable extent, always retaining the color under pressure of the finger. These patches are sometimes merely minute spots; but are often several inches in width. They are generally confined to the skin alone, but frequently appear simultaneously on the mucous membranes, and are then accompanied with considerable hæmorrhage.

This affection has been incorrectly classed amongst the exanthemata by Willan. The latter eruptions are accompanied, amongst other symptoms, by febrile disturbance, inflammation and injection of the cutaneous capillary system, whilst in purpura these phenomena are absent, and in their stead we find an *extravasation* of blood in the superficial layers of the skin. Purpura appears to us to have no analogue, and we have therefore placed it amongst the indeterminate diseases of the skin. The red patches, characteristic of purpura, are often designated by writers, *petechiæ*, and are always considered indicative of danger, as for example, when they occur in typhus fever, the plague, &c.

Willan describes five varieties of Purpura:—P. simplex; P. hæmorrhagica; P. urticans; P. senilis; P. contagiosa.

The iodide of potassium acts very favorably in some cases, when the patient is in a cachectic state, either from the long continuance of the disease, or the excessive or injudicious use of mercury, or from both combined, and the iodide of iron may also be given with advantage at times, under similar circumstances, as may also quinine and other tonics. Chalybeates are sometimes of very great service in the treatment of constitutional syphilis, and may often be given with advantage at the same time with the mercurial used, and sometimes even combined with it. M. Ricord is partial to the tartrate of iron. I have used the citrate with benefit, sometimes in a bitter tincture, and at other times in solution with iodide of potassium. The mineral acids are also sometimes very useful under certain circumstances. It is always important to adapt the particular form of mercury used, as well as the dose and frequency of administering it, to the state of the mucous membrane of the alimentary canal, without attention to which the good effects of any remedy used will be sensibly diminished, if not entirely counteracted.

Attendant symptoms sometimes require a modification of the general treatment, especially *iritis*, which demands the prompt administration of mercury, in such a way as to affect the system speedily, for which purpose calomel or blue pill, combined with opium, is almost always to be preferred.

In infantile syphilis I am in the habit of giving to the child small doses of hydrarg. cum creta, or calomel with chalk, sometimes combined with minute portions of Dover's powder, and having the warm bath used freely. The nurse must be put under appropriate constitutional treatment at the same time. H. D. B.

1. *Purpura simplex.*—(The *petechiæ sine febre* of some writers.) The patches are of a light red color at first, and of small extent. The eruption appears in the course of a few hours, and generally in the night; it is gradually diffused in the form of a number of distinct patches, which appear first and most commonly on the legs and thighs, and at a later period on the arms and shoulders, but with less intensity. In general, several successive eruptions appear: thus whilst the first crops fade, fresh ones are developed. In other instances a certain period of time, of various extent, intervenes between the appearance of each eruption. One of the nurses at the Hospital of St. Louis, of a strong and healthy constitution, was subject to this disease for two years, which used to vanish for a while, and then appear again, during the whole of that period. This woman was about forty years of age, and was subject to dysmenorrhœa, which generally induced a high state of plethora. The duration of purpura simplex varies from three or four weeks to eighteen months or two years. The patches last from six or eight days to a fortnight. It is frequently accompanied by giddiness, uneasiness, and lassitude, but never with any disturbance of the circulatory system. In some instances the disease appears without any symptom whatsoever. The patches are of a bright red color during the first few days, especially when the patient is young. In old people they are of a deeper and more livid color, and are irregularly rounded and distinct. After the lapse of several days, they become still darker in color, then yellowish, and at length slowly disappear.

Causes.—Purpura simplex may occur at any period of life, but it appears most frequently in young persons before the age of puberty and in females. It often occurs under very opposite circumstances. For example, it sometimes attacks individuals of a vigorous and sanguineous habit, in whom the circulatory power of the heart is perfectly healthy and the tissues of the body firm: in other cases it manifests itself in persons of debilitated and broken-down constitutions. In general, persons of fair, soft, delicate skin are more liable to purpura than those of a dark bilious complexion. It occurs more frequently in dry summer weather than in winter or in autumn. During the intense heat which prevails in Paris in July and August, the dispensary attached to the Hospital of St. Louis is frequented by persons laboring under this disease.

Diagnosis.—If the patches of purpura simplex are examined attentively, they cannot possibly be confounded with any other cutaneous eruptions, especially with the exanthemata. The persistence of the color of the patches under

pressure of the finger, which invariably characterizes this disease, a phenomenon that never exists in the simple and uncomplicated exanthematous diseases, is alone sufficient to distinguish these affections from each other. The bites of insects, flea-bites, &c., are easily recognized by the deep central point where the skin was penetrated, and cannot be confounded with purpura.*

Prognosis.—Purpura simplex is never a dangerous disease, even when it attacks feeble and debilitated persons. It almost invariably disappears by improving the diet of the patient, and by administering appropriate remedies.

Treatment.—When the disease appears in young and vigorous subjects, after severe exercise or the abuse of stimulants, venesection, strict regimen, tepid baths, and rest, are the most appropriate remedies. In persons of a broken-down or debilitated constitution, however, bleeding is not indicated: the treatment must be tonic in these cases, consisting of the preparations of iron, the mineral acids diluted, stimulating friction. The fumes of alcohol have been employed with success at the Hospital of St. Louis.

2. *Purpura Hæmorrhagica* (*morbus maculosus hæmorrhagicus*). In this variety the patches are more numerous, more diffused, and dark-colored; some are broader than others, and of a more livid color; others again resemble recent contusions. They generally appear first on the lower extremities, then on the arms and trunk, but rarely on the face or hands; we have, however, seen a case in which they were evolved on the eyelids. They are not usually raised above the surrounding surface; but the cuticle is sometimes elevated in the shape of blisters or bullæ: cases of this kind have been described by Biett, Bateman, and Reil. Patches of the same nature and appearance are developed on the gastro-intestinal and pulmonary mucous membranes, which frequently give way, and considerable hæmorrhage ensues, sometimes terminating fatally; but in general the sanguineous discharge is not copious; it returns again and again, and finally disappears spontaneously. In some cases it assumes a periodic character. In others there is a continual oozing of blood. These hæmorrhagic discharges are produced by the rupture of large ecchymoses on the gums, on the tongue, on the lining membrane of the mouth, and even in the bronchia, in the stomach, the

* Dr. Lamprey says that if the shirts of the patients present the appearance of blood dots, it is conclusive that the spots are caused by fleas, and that a knowledge of this fact has often determined the nature of the eruption when the puncta could not be found.—(*Dubl. Quart. Journ.*, Aug. 1849.) H. D. B.

intestines, the uterus, and the bladder. We have seen a case in which there was an accumulation of blood in the arachnoid.

This variety is often preceded by wandering pains, especially in the limbs, by a certain degree of depression, and inaptitude for either mental or corporeal exercise; but in other cases, the eruption is evolved without the appearance of any premonitory symptoms, and without any apparent transition from health to disease. M. Biett relates a case in which a young and vigorous man retired to rest in perfect health after his usual day's labor, and awoke next morning with extensive ecchymosis of the skin, and the blood poured in abundance from his nose and mouth.

In general, purpura hæmorrhagica is accompanied by a state of languor and great depression of spirits. The pulse is often feeble and easily compressed; in other instances, it is full and resistant; some patients experience pain at the epigastrium, and in the loins or abdomen, immediately before the patches appear. Others are subject to a dry hacking cough at that period. The digestive organs are also variously altered. Sometimes they remain in their natural condition; in other instances there is constipation or diarrhœa, with swelling and tension in the hypochondrium and epigastrium.

If these symptoms become aggravated or are prolonged, the patient emaciates, the skin presents a bloated appearance, particularly on the face and lower extremities, and when the patient has lain long in the horizontal position. The duration of this variety of purpura, like that of the former, varies considerably. It sometimes terminates in the course of a few days, in other instances it may be prolonged for several months and even for years. When it terminates fatally, death results from one or other of the following causes:—from violent hæmoptysis, from hæmatemesis, from severe intestinal hæmorrhage, or in some rare cases from flooding, which supervenes at the termination of child-bed, or at the critical period. M. Monod relates a case in which death was occasioned by an effusion of blood into the glottis, causing suffocation.

Causes.—The causes of this variety are also very obscure. It appears under the same contradictory circumstances as P. simplex. Sometimes it succeeds some of the exanthematous eruptions, in other cases it takes place after delivery.* P.

* Bateman speaks of a fatal case, developed during a course of severe salivation, produced by a few grains of mercury, combined with opium, given in a case of rheumatism. H. D. B.

hæmorrhagica appears most commonly in females and in young persons before the age of puberty. Some subjects seem predisposed to the disease, in whom the slightest pressure with the finger on the skin will produce ecchymosis. The proximate cause of the disease is attributed to a want of tone in the capillary vessels, which allow the blood to escape upon the cutaneous and mucous surfaces. This unhealthy condition of the vascular system is supposed to arise from the same causes which debilitate and undermine the constitution. But how are we to explain the causes which induce the disease in strong and healthy subjects? The blood itself seems to be altered so as to favor its exudation through the capillaries. We have seen it in a remarkably fluid state, even in the tissues into which it was effused. Some English pathologists attribute the disease to venous congestion; and this is not an improbable opinion. M. Biett saw one case in which this evidently existed. The tongue was greatly enlarged, and both it and the lips were of a deep blue color.*

Autopsy.—In subjects dead of this disease, the purple patches and ecchymosis are perceived to result from sanguineous effusions into the cutaneous and subcutaneous tissues, the one superficial, the other deep seated. The blood can easily be removed by washing, but we have never been able to discover the vascular ramifications in the neighborhood of the effusion. Patches of purpura may sometimes be detected on the mucous membrane of the mouth and pharynx. They are generally seen scattered upon the mucous surfaces of the stomach and intestines. They are less frequently observed on the peritoneum and pleura. They are also to be seen under the pericardium, upon the surface of the heart.

Aneurism sometimes coexists with purpura hæmorrhagica. The lungs are in some instances sound, but there is generally an effusion of blood in the parenchymatous substance of more or less extent, constituting true pulmonary apoplexy.

In other cases, partial ecchymosis may be detected in the substance of the muscles, in the viscera, and in the subserous tissues. In short, any organ in the body may be the seat of similar extravasation. In M. Monod's case, and that which we ourselves have seen, the brain, the lungs, the kidneys, and the spleen, in short, almost every organ in the body, were engorged, and seemed so many masses of extravasated blood. These are, however, rare cases. M. Robert has published one of a similar kind.†

* According to Andral, the fibrine of the blood probably exists in less than its normal proportion in every case of p. hæmorrhagica. H. D. B.

† Dr. Dunglison (*Cycl. Pract. Med., Amer. edit., Art. Purpura*) alludes to a

Diagnosis.—When the pustules of syphilitic ecthyma are set close together, they often leave behind patches and spots of a purple-red color, which at first sight resemble those of purpura; but the pre-existence of pustules, and the progress of the disease, will clear up the diagnosis. Ecchymosis produced by violence cannot be mistaken for that which occurs spontaneously. Hæmorrhage never occurs either in the purple patches of ecthyma, or in the latter case. We have known a case of this complaint to be mistaken for a gangrenous disease, but such an error could not have occurred unless from gross ignorance.

Scurvy, when accompanied by spontaneous ecchymosis and hæmorrhage, appears to be identical with purpura hæmorrhagica. The distinctions described by authors as existing between these diseases, are: 1. That scurvy generally results from bad feeding, fatigue, exposure to cold and damp, depressing emotions, &c., whilst P. hæmorrhagica occurs independently of these causes. 2. That scurvy disappears under a tonic plan of treatment, and the use of fresh vegetables, which is not the case with P. hæmorrhagica. But in advancing that these diseases are distinct from each other in their nature and characters, it is necessary that that position should be supported on some more positive data than those now mentioned. In fact, the causes to which is attributed the development of scurvy, are the same as those which commonly produce P. hæmorrhagica; and if the tonic treatment does not always succeed in the latter disease, it sometimes fails likewise in the former. But even admitting their identity, it is still difficult to account for the development of P. hæmorrhagica under circumstances the reverse of those commonly associated with scurvy. Too rich food and want of exercise may produce the same results as causes directly depressing in their nature; or the difference must perhaps be attributed to idiosyncracy.*

fatal case of diseased spleen, in which that organ was found greatly enlarged, and encephaloid in certain parts, and in which signs of p. hæmorrhagica had supervened. In another case of purpura the spleen was sound, but the liver was scirrhous, and incurable jaundice preceded the fatal ter.. mation. H. D. B.

* The following tabular summary of the diagnostic marks between purpura and scurvy are given by Dr. Curran:—

PURPURA.	SCURVY.
Most frequent between five and eighteen years of age.	Most frequent after eighteen years of age.
Females chiefly affected.	Males chiefly affected.
Gums bleed sometimes, but are never spongy, and rarely sore.	Gums more or less sore and spongy.
Petechial spots frequent: ecchymosis rarer.	Ecchymosis more frequent than petechiæ.

The diagnosis of these concomitant affections is often difficult, and requires considerable attention. The epigastric and abdominal pains, and nausea, might appear as the forerunners of gastro-intestinal inflammation, if the slowness of the pulse, and the absence of heat of skin, did not indicate a state of internal congestion as their true source.

Prognosis.—The physician should always be guarded in his prognosis in this disease; for although it may appear mild and unimportant at the commencement, it may suddenly assume an intense character, and even terminate fatally. The age and constitution of the patient, and the duration of the eruption, the frequency of the hæmorrhage, and especially the amount of blood lost, should be taken into account in forming the prognosis. P. hæmorrhagica is generally a dangerous disease, and often terminates in death.

Treatment.—The treatment of purpura hæmorrhagica is exceedingly difficult. Medicines of a perfectly opposite character have been recommended at various periods for the cure of this disease. The general debility of the system would apparently indicate the exclusive employment of active tonic remedies; but in many cases they would be not only inefficacious, but absolutely injurious. Tonic medicines are only serviceable in case of children or persons debilitated by age, bad feeding, and general privation, being attacked; and even then, they should be prescribed cautiously and conjointly with hygienic measures. Those which we commonly employ are the decoction of bark, extract of rhatany (in the proportion of a scruple to a drachm in the day), old wine, dilute

PURPURA.	SCURVY.
Eruption always dark colored at first.	Shades of eruption the most various.
All parts nearly equally affected.	Lower extremities almost exclusively affected.
Never any muscular indurations.	Muscular indurations nearly always.
Hæmaturia not infrequent.	Hæmaturia almost never.
Bloody stools frequent.	Bloody stools very rare.
Hæmoptysis occasionally.	Hæmoptysis (true) never.
No neuralgic pains.	Neuralgic pains and pain in spots invariable.
Never effusion in joints.	Effusion in joints frequent.
Never contraction of flexors.	Contraction of flexors frequent.
Rarely lasts more than a few days.	If not interfered with, lasting for months.
Scarcely ever fatal.	Frequently fatal, if unchecked.
Connected with no discoverable error in diet.	Always in connexion with an error in diet.
Sporadic; epidemics extremely rare.	Affects large numbers of individuals at the same time.
Cured by turpentine and purgatives.	Speedily cured by lemon juice and fresh vegetables.

(Curran on Scurvy, *Dubl. Quart. Journ. Med.*, Aug. 1847.) H. D. B.

mineral acids, and succulent food, according to the age and habits of the patient. On the other hand, when the patient is young, robust, and plethoric, and there are pain and tension in the abdomen, together with hardness or frequency of pulse and constipation, these remedies should be carefully avoided.

Purgatives have been strongly recommended in large doses on the ground that the pain which is felt in the epigastric region and in different parts of the abdomen, and the derangement of the digestive functions, is the result of congestion, and not of inflammation—a view which seems to derive support from the entire absence of fever in these cases, from the success of this mode of treatment, and also from autopsic examination. Those commonly used are spirits of turpentine, calomel, jalap, and castor oil. Bleeding also seems to be indicated by the congested state of the system. Nevertheless, it should be very carefully and cautiously employed, in consequence of the hæmorrhage which succeeds it, which is often difficult to be arrested, and especially on account of its increasing the general debility of the system. Indeed, the only cases in which it is at all indicated, are where the patients are young and vigorous, and symptoms of inflammation are present, and when the hæmorrhage from the skin and mucous membranes is not copious.

The treatment which M. Biett found most successful consisted in the employment of acidulated drinks and laxatives. In some cases he employed the extract of rhatany with ice with much success. M. Brachet has also found this remedy very serviceable. Lotions or injections of iced water, acidulated, and rendered styptic, and plugging, will be necessary when the hæmorrhage continues from any of the natural outlets of the body. As the blood does not coagulate or clot in these instances, every symptom should be carefully watched, and promptly attended to. Cold ablutions of the entire body are sometimes useful; perhaps the cold shower bath might also be advantageously employed; compresses saturated in vinegar and water, in a solution of the chloride of lime, or in a mixture of alcohol and water, may be applied to the purple and ecchymosed patches of the skin with advantage. The pains which sometimes exist in different parts of the body may be assuaged by opiates, emollient lotions, and cataplasms. During convalescence, the patient should live upon generous food, animal jellies, roast meat, good wine slightly diluted and iced, and should avoid damp or moisture. Tonics may be advantageously employed at this period.

The other varieties of purpura described by Willan are merely modifications of the foregoing. In *P. urticans* the

patches are sometimes raised above the surrounding surface, instead of remaining on a level with the skin; but this slight tumefaction disappears in the course of one or two days. *P. senilis* presents no other peculiarity than that of occurring in old people; and *P. contagiosa* is merely the petechial eruption which accompanies the severe forms of typhus fever.*

ELEPHANTIASIS ARABUM.

SYN.—*Barbadoes leg; Sarcocele d'Egypte; Eolica Japonica; Lèpre éléphantiasis; Eléphantiasis Tubereux;* Glandular disease of Barbadoes.

As we have already observed, two very different diseases have been described under the common name of elephantiasis. The one—*elephantiasis of the Greeks*—a tubercular affection, and accompanied by fawn color of the skin, diminished sensibility of the parts, and loss of the eyebrows, eyelashes, &c.

* Plumbe was very partial to the use of active purgatives, especially of a mercurial kind, attributing the disease to derangement of the functions of the liver.

M. Gibert mentions the favorable effects of rhatany, given freely in extract, and used in decoction as a drink, in a case in which other means had failed.

Dr. Barclay, of Leicester, reports, in Provinc. Med. and Surg. Journ. (see *Med. Examiner*, Phila., July, 1845), a case in a girl, eleven years old, attended with hæmorrhages from different parts, in which gallic acid was given, five grains every four hours, combined with sugar, with a stimulant mixture containing carbonate of ammonia, with a very favorable result. Wine had been first given.

Oil of turpentine is a favorite remedy with some in p. hæmorrhagica. Dr. Neligan thinks very favorably of it, and gives it in the form of both draught and enema, the usual dose for adults being from ℥j to ℥iss, and for children from 3ij to ℥ss, generally with castor oil. (*Dublin Jour. Med. Sci.*, vol. xxviii, p. 191.)

Nitric acid has also been given with benefit in this form of purpura, freely diluted in water, with gum arabic and sugar. I have also exhibited this remedy with advantage in p. *simplex* when it has persisted for some time.

Creasote has also been recommended, in doses of half a drop to a drop, dissolved in alcohol and suspended in mucilage, and given every six hours.

In p. *urticans* there is less danger of complication of hæmorrhages, and mercurial cathartics are most usually indicated, this variety of the disease being apparently more nearly allied to urticaria than to purpura, and requiring laxatives and mild tonics. Quinine is often useful in this form.

The disease exists in two distinct, and indeed sometimes opposite, conditions of the system, and may consist of either an increased or a diminished action of the capillaries. The latter condition more frequently prevails, and hence the more frequent demand for tonic and stimulating measures; while, in other cases, depletion by cathartics, and even by abstraction of blood, may be called for. Hence, in all the forms of purpura, our treatment must be governed by the constitution and habits of the patient, and the character of the symptoms in each individual case, much more than by the name of the disease or its external appearances.

H. D. B.

The other, *elephantiasis Arabum*, which was first described by the Arabian writers, is characterized by an indolent hard enlargement or swelling of the skin, and of the subjacent cellular and adipose tissues, producing great deformity of the parts.

Elephantiasis Arabum may appear on any part of the body. It has been observed on the face, neck, breast, abdomen, scrotum, penis, pudendum, and margin of the anus; but the lower extremities seem to be the special seat of the disease. It appears more frequently on the legs than on any other part of the body, and imparts to them a singular and striking appearance. It seldom attacks both limbs at once, but usually fixes itself upon one side. The duration of elephantiasis Arabum is invariably long; it often continues during the life of the patient. Sometimes it disappears for a short time, and then reappears on the same or on some other parts of the body. It generally sets in with considerable rapidity, but soon assumes its characteristic chronic character.

Symptoms.—This is not a common disease in Europe. Several diseases have been described under this name which are different in their nature, or at least the commencement of which is not characterized by acute inflammation of the lymphatics, and which still are followed by thickening and hardening of the subcutaneous cellular tissue. This was the case with two patients whom we saw at the Hospital of St. Louis. In one case the subcutaneous cellular tissue of the leg became the seat of chronic inflammation, which terminated in hypertrophy and hardness of the skin, and in enormous development of the limb.

In another case, a sailor, who had been in the habit of constantly standing in the water, the disease supervened on the cicatrization of a varicose ulcer of the leg; the skin and subtegumentary tissues became hard and hypertrophied; it spread upwards, and the leg and almost the whole of the thigh were increased to double the natural size, and were hard, tense, shining, and very slightly painful. The disease was accompanied, in this case, by engorgement of the inguinal glands, which, however, was a consecutive symptom; for the lymphatic system did not appear at all affected in the early stages of the disease. M. Bouillaud records a similar case, in which the lower extremities of a young female became enormously enlarged, so as to resemble the legs of an elephant, resulting from obliteration of the crural and cava veins. (*Archives Gén. de Méd.*, tom. vi., p. 567.) In the great majority of cases, however, elephantiasis Arabum consists of hypertrophy of the affected parts, a hypertrophy of a peculiar kind,

and which is essentially connected with inflammation of the lymphatic vessels.*

This disease generally begins in rather a sudden manner, and without any premonitory symptoms. The patient suddenly experiences a violent deep-seated pain in the part about to be affected, which extends along the course of the lymphatic vessels. The latter becomes hardened and tense, and stretched in the form of a nodulated cord, which is often extremely painful to the touch, and extends to the glands of the groin, or of the axillæ. When the disease attacks the limbs, as it most commonly does, erysipelatous inflammation supervenes, the subcutaneous cellular tissue becomes inflamed, and general engorgement and tumefaction of the parts ensue. These morbid conditions are accompanied by febrile symptoms—thirst, nausea, vomiting, rigors of considerable duration, succeeded by burning heat, and often by copious perspirations. The brain is sometimes sympathetically affected, and delirium ensues.

All these symptoms, with the exception of the swelling of the limb, cease for a certain period and return again. At the end of each accession of these phenomena, the chain of lymphatic vessels loses its inflammatory appearance, but the swelling increases each time, and continues long after the other symptoms have ceased; and the limb becomes so hard as to resist the firmest pressure with the finger. The disease may go on in this manner for an indefinite period; and, when its progress becomes arrested, it may remain stationary for several years, when the limb exhibits that peculiar unseemly appearance, and enormous development, from which the disease derives its name. Sometimes the swelling is even and continuous along the extremity; in other instances it is

* Mr. Bascome of London, who saw this disease during a long residence in British Guiana, thinks that the hypertrophy is caused in two ways:—1. By erysipelas, more or less complicated with visceral disease; 2. by a want of tone in the lymphatics, induced by a sort of sub-inflammation of them, seldom or never complicated with visceral disease, being more of a local character, and occurring more frequently in lymphatic temperaments. He gives the distinctive symptoms of the two forms, with practical remarks on the treatment of the disease. (*Lond. Lancet*, Amer. Rep., Aug., 1846.)

Dr. Bellingham, on the other hand, contends that this hypertrophy of the lower extremities is neither the result of inflammation of the lymphatic glands or absorbent vessels, nor of obstruction or inflammation of the venous system of the limb; but is produced by repeated attacks of erysipelas of the part, and hence that it is only in the early stage of the disease that treatment can prove effectual. (*Edinb. Monthly Jour. and Retrosp.*, Aug., 1849, from *Dublin Med. Press*, Dec. 13, 1848.)

Mr. Southam gives a striking case of this disease affecting the leg and thigh of a woman (with a plate), and remarks on its pathology, in Med. Chir. Transact., vol. xxx., 1847, p. 69). H. D. B.

broken here and there by deep furrows, producing a hideous deformity.

Elephantiasis Arabum occasionally evinces a tendency to spread, and gradually proceeds from the arm to the forearm, or from the leg to the thigh. The subcutaneous tissues continue the morbid alteration, and become finally converted into a soft, fungous, and even lardaceous substance. In other cases again, it is confined to a single region, and may occasion but slight enlargement of the limb; but in every instance the palms of the hands and the soles of the feet are free from swelling, whilst these extremities are considerably tumefied in the lines of extension; evidently the result of the more compact nature of the cellular tissue in the former localities. Towards the close of the disease, the skin may present a variety of appearances. It may assume merely a sickly whitish color, without any other morbid character; or the veins may be enlarged and distended, the skin grooved and furrowed in various parts, or it may be covered with varicose tumors, which give it a sort of livid appearance.

Independently of these, the skin may become the seat of other morbid alterations. Thus, for example, erythematous or even vesicular inflammation may supervene. In the latter event a slight exudation is established, and, at a later period, small, thin, soft, yellowish scabs. In other cases the roughness continues to increase, and scales closely resembling those of ichthyosis appear, or it becomes covered with small, soft, fungoid vegetations. Finally, fissures, excoriations, and ulcerations of the cuticle, covered with thick yellow scabs, may sometimes occur. The lymphatics are often hard and scirrhous. They suppurate, and sometimes even become gangrenous. Deep-seated indolent abscesses form on different parts of the limb, which is by this time enormously enlarged, and pour out large quantities of fœtid pus.

This disease most commonly attacks the limbs; but not unfrequently occurs on the penis, whence it generally extends to the scrotum. The penis sometimes attains a considerable size. M. Biett had a case in which its circumference was increased four-fold.*

The mammæ also appear to be liable to this affection, and

* Mr. Key operated on a Chinese peasant, who came to London for that purpose in 1831, who had hypertrophy of the prepuce to such a degree that the tumor reached to the ankles, and measured four feet in its greatest circumference, and weighed fifty-six pounds after its removal. Baron Larrey once removed a tumor of the scrotum of this kind, which weighed sixty-two pounds, and Clot-Bey removed one, with a successful result, in Cairo, which weighed one hundred and ten pounds. H. D. B.

become so enlarged that they are obliged to be suspended with a bandage placed round the neck of the patient. Small isolated scirrhous tumors are often developed in these cases, which suppurate and give rise to incurable ulcerations. The sensibility of the parts is rarely destroyed in this disease; but the joints in the neighborhood become the seat of chronic inflammation; adhesions take place, the articular movements are obstructed, and the limb becomes a useless encumbrance to the patient.

Causes.—Elephantiasis Arabum is neither contagious nor hereditary; it attacks indiscriminately males and females, rich and poor. It occurs most frequently in adults; but it occasionally appears in young people and in children. And even the induration of the cellular tissue of new-born infants (*sclerema*) seems to be related to this disease. It occurs principally in the West Indies. It is endemic in some of the tropical countries, in the torrid zone, near the equator, &c.; and its existence in these regions is attributed to the draughts and vicissitudes of temperature which occur night and morning. It sometimes results from obliteration of the veins of the leg, or parts affected; it also supervenes on cicatrization of old ulcers, and from chronic inflammation of the cuticle, extending to the subtegumentary tissues.

Autopsy.—The skin is generally indurated, covered with yellowish scabs, or with thick incrustations, and is sometimes furrowed and covered with small hard scabs, not unlike those of ichthyosis. 1. The epidermis is greatly thickened, furrowed, and firmly adherent. 2. The papillary bodies are highly developed and perfectly distinct from the cutis. They are described by Andral and Chevalier as being elongated, enlarged, and prominent. 3. The true skin appears considerably thickened and hypertrophied, sometimes to the extent of more than half an inch. 4. The cellular tissue is also greatly increased in density, and sometimes contains within its meshes a semi-fluid gelatinous matter; but it is more commonly indurated, slightly scirrhous, and becomes lardaceous as it approaches the cutis. 5. The muscles are generally pale, soft, discolored, and atrophied. The veins are sometimes found obliterated, and in the case reported by M. Bouillaud, this obliteration extended even to the vena cava itself. No other lesion is found which can be referred to this disease, except, occasionally, glandular engorgements in places remote from the seat of the disease.

Diagnosis.—However distinct the inflammation and nodulated appearance of the lymphatics may be, it is not easy to say whether these symptoms are the forerunners of elephan-

tiasis, any more than of those other diseases which they precede, that never terminate in hypertrophy of the subcutaneous tissues. Even when elephantiasis is accompanied by all its characteristic phenomena, it may still be confounded with anasarca or with œdema. Indeed, it is not unlikely that these diseases have been mistaken for, and described as, cases of elephantiasis. However, the presence of general symptoms, and the morbid condition of some of the internal organs, in the one, or at least the softness of the tumor, its mode of development, and the state of the patient's health; and in the other the progress of the disease, which is entirely local, the integrity of all the other organs of the body, the form, resistance, and indurated condition of the tumefied parts, are quite sufficient to distinguish these different diseases.

Prognosis.—The prognosis of Elephantiasis Arabum is generally unfavorable, especially when it is of long duration, when the skin and subcutaneous strata are deeply and extensively involved, and when the disease arises from obliteration of the veins.

Treatment.—At the onset of the disease, when the lymphatics are inflamed and swollen, and when the eruption is much diffused, repeated bleeding should be employed, and this will not prevent the application of a number of leeches along either side of the nodulated lymphatic cords, a remedy which is often sufficient in itself, without general bleeding. Emollient poultices are also used in this stage. When the disease assumes the chronic character, as it almost invariably does, the treatment becomes more difficult. Both local and general bleeding have also been recommended in this instance, but evidently with little benefit. They are not appropriate remedies for the chronic form of Elephantiasis Arabum. We have seen the limbs of patients suffering from that disease scarified all round, without deriving the slightest benefit or amelioration of the morbid structure. The same with regard to blisters and cauterization, and the internal use of mercury. Mercurial frictions have been proposed, and in our opinion are more likely to be beneficial than any of the foregoing measures. Our experience at the Hospital of St. Louis leads us to think that the best mode of treating elephantiasis is by compression, by iodine frictions, and by the vapor douche.

Compression is the best remedy that can be employed in this disease. It should be made with a long bandage, two or three fingers broad, and moderately tightened. It usually soon reduces the tumefaction of the parts; and if it does not restore them altogether to their natural condition, it facilitates the employment of other measures. Friction, with

certain absorbent remedies, may be employed with some chances of success. An ointment, composed of a scruple to half a drachm of the iodide of potassium to an ounce of lard, rubbed over the swelling, is the best application of this kind. The use of this remedy must be suspended, if, as often happens in Elephantiasis Arabum, the diseased parts should become attacked with acute inflammation. The vapor douches are especially serviceable in these cases. By increasing the vitality of the part, they promote resolution, and contribute powerfully towards the cure of the disease. They should be applied for a quarter of an hour at a time to the swollen parts, and during their administration the patient should rub the swollen and indurated surface briskly and repeatedly.*

Internal treatment is in general useless. The administration of purgatives appears occasionally to produce a good effect. The treatment should be modified when other affections accompany this disease. As for example, erythema, and an eruption of vesicles, often supervene during its progress, and induce smart inflammation of the skin. In these cases, emollient applications and simple baths will be necessary; and at a later period sulphur baths may be usefully employed. In the great majority of cases, however, the disease will resist every plan of treatment. With regard to amputation, which has been both recommended and practised, we are of opinion that the cases where it is indicated are exceedingly rare; and we have seen a patient at the Hospital of St. Louis, whose leg had been amputated for Elephantiasis Arabum, and in the course of a short period the disease attacked the left arm.

CHELOIDEA.

SYN.—*Keloide; Cancroide.*

This is a chronic tuberculated swelling of the skin, first described by Alibert under the names of cancroide and keloide, from its supposed resemblance to a crab or tortoise. It is an exceedingly rare disease, so much so that Bateman denied its

[* A case of this disease came under my observation about a year ago, in which the local application of the vapor of sulphur and iodine, together with the administration, internally, of the iodide of iron, was attended with success. The patient was a married woman, aged twenty-one, of a full and plethoric habit of body. The right leg and thigh were enormously enlarged, tense, hard, and painful at times. She suffered exceedingly for upwards of a year with this complaint, but is now in the enjoyment of good health. B.]

existence. But nevertheless it does exist, and is distinguished from all other cutaneous affections by peculiar and well-marked characters.

It appears in the form of a slight tumefaction of the skin, which gradually enlarges. It forms small flat tumors, often of an irregular form, but commonly oval-shaped, with a slight depression in the centre. In other cases it is elongated, angular, and shining. The epidermis covering it is thin and wrinkled, which gives its surface the appearance of the cicatrix of a burn. It is hard and resistant to the touch, and its color is sometimes deep, sometimes pale red. Moreover, this color varies with the degree of temperature, and especially in women during the menstrual period. These small flat tumors only rise a few lines above the level of the skin, and this elevation is generally more marked on the circumference than in the centre. In the majority of instances there is only one small tumor present; but in others several appear together. M. Biett saw a young woman with eight of these small flattened tumors on the neck and lateral part of the breast. We have lately seen a young Belgian woman with more than twenty spots of cheloides upon the breast and over the course of the superficial lymphatic vessels of the arms and forearms. They were indolent, *perfectly round*, some of them of a rose color, and others of a distinct red. They were seated in the dermis. In front of the mammæ, which had become, as it were, atrophied, there was a group of these patches touching at their edges, but not running together.

The tumors may reach an inch and a half to two inches in their largest diameter, whilst they often do not exceed a few lines, especially when there are several present. They are often accompanied by deep, sharp, shooting pains, which occur most commonly after meals, and on atmospheric changes. But they are also frequently developed without the occurrence of any of these symptoms. This disease, when left to itself, advances very slowly. It rarely terminates in ulceration, and in some cases it fades and disappears spontaneously, leaving no other trace of its existence than that of a firm white cicatrix. The usual seat of the cheloidea is the chest, between the mammæ. They have also been met with on the neck and arms.

Causes.—We have no precise knowledge regarding the etiology of this disease. It occurs in some cases, as we have seen, without being preceded or accompanied by either local or general symptoms. It sometimes appears to result from external causes; and we have seen it supervene on a deep scratch on the breast of a female. It has never been observed

to attack children. It commonly appears in young people, and is not confined to either sex.*

Diagnosis.—The cheloidea should be carefully distinguished from the *cancerous* affections, with which they have not the slightest analogy. In general, cancer of the skin gives rise to round, prominent, livid-colored tubercular indurations, which ulcerate at the summit, and are surrounded by dilated veins. The neighboring glands become engorged, and sometimes acquire an immense size. The cheloidea, on the contrary, when situated on the breast, consist of a flattish elevation, depressed in the centre, raised at the edges, and developed on a healthy surface. Neither should this affection be confounded with *syphilitic tubercles*, which are always copper-colored, round at their summits, often assembled in clusters, generally intermingled with cicatrices with loss of substance, and accompanied by other characteristic symptoms.

When the cheloidea are more numerous than usual, they are generally separated from each other by intervals of sound skin; they are rose-colored, sometimes square, sometimes triangular-shaped, but never rounded like syphilides. The cheloidea cannot be confounded with *sanguineous* tumors, which sometimes assume the form of vascular vegetations, and are either scattered or dispersed in groups. At first they do not rise above the level of the skin, but at a later period they extend, become yellowish, and take on the appearance of a true vegetation. The *erectile* tumors do not resemble this disease; they are generally of a brownish color, granulated on the surface, broad at the base, deeply implanted in the skin, *soft* to the

* M. Velpeau makes two kinds of cheloides:—1, the *spontaneous*, or that preceded by no known cause; 2, the *cicatricial*, or that forming on a scar, the shape of which it assumes. The latter variety sometimes follows the pustules of small pox, as well as other phlyzacious pustules; also long incisions and wounds of different kinds, as sabre cuts, &c. I have seen it follow syphilitic pustules, also an irritating ointment which had produced ulceration; and in one instance, in a female, saw it follow the long continued pressure made by wearing a key in the bosom.

In a case of this affection in a negro, between forty and fifty years of age, whom I have had occasional opportunities of seeing for seven or eight years past, there are twelve or fifteen spots, of various forms and sizes, scattered over the chest, back, and limbs, the largest one being in the middle of the chest, and measuring between three and four inches in length, and about an inch and a half in breadth, its longest diameter crossing the chest transversely. Some of the other spots are cylindrical, others olive-shaped, and others conoidal, varying in length from half an inch to an inch and a half, and in breadth from a third to half an inch. The spot where he was vaccinated, when first seen, which was eight years since, became, at the end of three or four months, the seat of the same disease, covering the whole surface of the scar. The first spot was noticed about twenty-three years before, and was preceded by itching, and came out after getting very much heated. Two of his brothers had the same disease, and of his own children, four girls and six boys, three boys only had it. His general health is very good. H. D. B.

touch, and frequently moving with the pulsation of the arteries. In fact, the cheloidea have no real resemblance to any other disease.

Prognosis.—These tumors are never dangerous; and if they ulcerate, it is the result of injudicious treatment. They generally occur in persons whose health is otherwise perfectly good. There is some reason to believe that they may disappear and leave only a slight cicatrix.

Treatment.—Extirpation and cauterization of the tumors does not seem to be attended with much benefit. The sulphur douche is sometimes used with advantage in softening the tumors. Friction with the ointment of iodide of potassium, or the application of a plaster containing iodine and opium if there be any pain present, occasionally succeeds in reducing deeper seated swellings, and may be tried for the removal of these. We saw good results in one instance from the internal use of the iodide of potassium, in a case where the patches were numerous and appeared to depend upon a strumous diathesis.

BIETT'S FORMULARY.

PRINCIPAL REMEDIES EMPLOYED BY M. BIETT AT THE HOSPITAL OF ST. LOUIS.

INTERNAL REMEDIES.

I. PTISANS.

1. *Bitter infusions.*—Leaves of saponaria, half an ounce; boiling water, one pint. Infuse for half an hour; strain and sweeten. The infusions of chicory, hop, scabiosa arvensis, &c., may be prepared in the same manner. *Dose*—Indefinite. *Use*—In most chronic diseases of the skin.

2. Dried root of the lapathus, one ounce; boiling water, one pint. Infuse for six hours; strain and sweeten. The infusions of inula and burdock may be prepared in the same manner. Use and dose as before.

3. Pounded gentian roots, one drachm; water a quart; boil for five or six minutes, and then add two drachms of bitter herbs, infuse for two hours, strain and sweeten. *Dose*—Indefinite. *Use*—Chronic diseases of the skin. Scrofula.

4. *Acidulated lemonade.*—Dilute sulphuric acid, twelve to twenty-four drops; decoction of barley, one pint; sirup, q. s.

5. Hydrochloric acid, twelve to twenty-four drops; decoction of barley, one pint; sirup, q. s. Or,

6. Dilute nitric acid, twelve to twenty-four drops; infusion of saponaria, one pint; sirup, q. s. *Dose*—Three glasses daily. *Use*—Eruptions accompanied by pruritus. Lichen; eczema; some syphilitic eruptions.

7. *Alkaline mixture.*—Subcarbonate of potass, half to one drachm; bitter infusion, one pint. Or,

8. Subcarbonate of soda, half to one drachm; barley-water, one pint. *Dose*—Four glasses daily. *Use*—Lichen; prurigo; chronic diseases with itching.

9. *Laxative mixture.*—Sulphate of soda, half an ounce; infusion of chicory flowers, one pint. Or, bitartrate of potass, two drachms; whey, one pint. *Dose*—Two or three glasses in the forenoon.

10. *Sudorific mixture.*—Scraped guaiacum, one ounce. Boil down to a pint in a pint and a half of water; strain and sweeten. The decoction of sarsaparilla or china may be prepared in the same manner. *Dose*—Two glasses in the morning, and two at night. *Use*—Syphilitic affections. Or,

11. Scraped guaiacum, one ounce; water, a pint and a half; boil down to a pint, and add a scruple of mezereon. *Dose* as above. *Use*—M. Biett often used this drink with success in cases of secondary syphilis. Or,

12. Sarsaparilla, one ounce; water as before; boil down to a pint, and add a drachm of coriander seeds. *Use* and *dose* same as above.

13. *Feltz's mixture.*—Sulphuret of antimony, four ounces; place in a small linen bag, and boil in water for an hour; then remove it and place it in a vessel with sarsaparilla, in pieces, three ounces; isinglass, fourteen scruples; water, six pints. Boil down to one half, and then strain. *Dose*—Three glasses a day; morning, noon, and night. *Use*—Constitutional syphilis.

14. *Zittman's decoction.*—(No. i.) Sarsaparilla, twelve ounces; water, twenty-four pints; boil for two hours. Suspend in the liquid a linen bag, containing sul-

phate of alumina, an ounce and a half; mercurius dulcis, half an ounce; sulphuret of mercury, one drachm. Towards the end add liquorice, an ounce and a half; senna leaves, two ounces; anise seed half an ounce. Remove from the fire, and allow the fluid to infuse. Strain so as to have sixteen pints of decoction No. i.

15. (No. ii). Take the residue of decoction No. i.; sarsaparilla, six ounces; water, twenty-four pints, boil for two hours, and add orange peel, cinnamon, cardamoms, of each three drachms; liquorice, six drachms. Infuse for an hour, and strain to sixteen pints. *Use*—Constitutional syphilis. *Dose*—The patient commences by taking, the evening before, six of the following pills at intervals of one hour between them: jalap, two grains; gamboge, half a grain; aloes, four grains. On the following morning he begins early with half a bottle of No. i., taking a glass every half hour, while in bed. At midday a whole bottle of No. ii. in glasses, every half hour. In the evening, the remainder of the bottle containing No i. in glasses. The decoction is taken for twenty-two to forty-five days.

16. *Decoction of dulcamara.*—Dulcamara, half an ounce; water, a pint and a half. Boil down to two thirds. The quantity of the remedy may be increased to one ounce, or an ounce and a half. *Dose*—Half a glass at first; then a glass, morning and evening. *Use*—Lepra vulgaris; chronic diseases.

17. *Decoction of orma.*—Orma pyramidalis four ounces; water, four pints; boil down to a half. *Dose*—Two to four glasses a day. *Use*—Scaly diseases.

II. MIXTURES—SOLUTIONS—SYRUPS.

18. Syrup of fumaria, twelve ounces; syrup of viola tricolor, four ounces; bisulphuret of soda, two drachms. Mix. M. Biett often employed this mixture in cases of eczema, lichen, and several chronic diseases of the skin. *Dose*—Two spoonfuls a day.

19. Syrup of fumaria, a pint; bicarbonate of soda, three drachms. *Dose*—Two teaspoonfuls: one before breakfast; the other at bed-time. *Use*—Eczema; lichen; prurigo.

20. *Pearson's solution.*—Arsenite of soda, four grains; water, four ounces. *Dose*—From twelve drops to a drachm or more. *Use*—Most chronic diseases of the skin; eczema, impetigo, lichen; but chiefly in squamous diseases, lepra, psoriasis, &c.

21. *Fowler's solution.*—Arsenious acid, and carbonate of potass, of each seventy-eight grains; distilled water, a pint; alcohol, half an ounce. *Use*—The same as Pearson's solution. *Dose*—Three or four drops gradually increased to twelve or fifteen.

22. *M Biett's solution.*—Arsenite of ammonia, four grains; water, four ounces. *Use*—Same as above. *Dose*—Same as Pearson's solution.

23. *Larrey's syrup.*—Sudorific syrup, one pint; bichloride of mercury, hydrochlorate of ammonia, and extract of opium, of each five grains; Hoffmann's liquor, half a drachm. *Dose*—Half an ounce to two ounces. *Use*—Syphilitic eruptions.

24. *Carbonate of ammonia mixture.*—Syrup of mezereon, two ounces; balsam of tolu, four ounces; subcarbonate of ammonia, half an ounce. *Dose*—A spoonful morning and evening. *Use*—Constitutional syphilis.

25. *Solution of Hydrochlorate of lime*—Crystallized chloride of lime, two drachms to half an ounce; distilled water, a pint; add syrup of gentian, eight ounces. *Dose*—One or two spoonfuls morning and evening. *Use*—Scrofulous lupus.

26. *Van Swieten's liquor.*—Bichloride of mercury, eighteen grains; water, twenty-nine ounces; alcohol, three ounces. *Dose*—A teaspoonful daily in a glass of decoction of sarsaparilla. Each ounce contains a little more than half a grain. *Use*—Secondary syphilis.

III. POWDERS. PILLS.

27. Sublimed sulphur, magnesia, of each half an ounce. Make eighteen packets. *Dose*—One daily. *Use*—Chronic eczema; scaly diseases.

28. Proto-iodide of mercury, twelve grains; extract of lettuce, two scruples. Make forty-eight pills. *Dose*—One to four. *Use*—Syphilis. Or,

29. Proto-iodide of mercury, half a drachm ; extract of guaiacum, one drachm ; extract of lettuce, two scruples ; syrup of sarsaparilla, q. s. Divide into seventy-two pills. *Dose*—One, and then two daily. *Use*—Syphilis.

30. *Hydrochlorate of gold.*—Hydrochlorate of gold, two grains ; gum arabic, six grains. Divide into twelve parts. *Dose*—One part rubbed upon the tongue twice a day. *Use*—Syphilitic eruptions.

31. *Bichloride of mercury.*—Extract of aconite, six grains ; bichloride of mercury, two grains ; marshmallows powder, eight grains. Make eight pills. *Dose*—One to four. *Use*—Syphilis.

32. *Deuto-iodide of mercury.*—Deuto-iodide of mercury, six grains ; marshmallows powder, half a drachm. Make thirty-six pills. *Use*—The same. *Dose*—Two or three a day.

33. *M. Sedillot's pills.*—Strong mercurial ointment, one drachm ; soap, two scruples ; mallows powder, one scruple. Make thirty-six pills. *Dose*—Two or three daily. *Use*—The same.

34. *M. Biett's pills.*—Mercurial ointment, powdered sarsaparilla, of each a drachm. Make forty-eight pills. *Use*—The same. *Dose*—One to four daily. Or,

35. Phosphate of mercury, half a drachm ; extract of fumaria, one drachm. Make forty-eight pills. *Dose*—One or two a day. *Use*—As before.

36. *Aconite pills*—Extract of aconite, half a drachm ; mallows powder, two scruples. Make forty-eight pills. *Dose*—One or two morning and evening. *Use*—Syphilitic eruptions ; nocturnal pains.

37. *Asiatic pills.*—Arsenious acid, one grain ; black pepper, powdered, twelve grains ; gum arabic, two grains ; water, q. s. The arsenious acid and pepper to be rubbed together in an iron mortar for several hours, and the gum arabic and water to be then added. Make twelve pills. *Dose*—One or two a day.

38. *Arsenite of iron. M. Biett.*—Arsenite of iron, three grains ; extract of hop, one drachm ; mallows powder, half a drachm ; orange flower syrup, q. s. Make forty-eight pills ; each contains the one-sixteenth of a grain. *Dose*—One daily. *Use*—The two preceding formulæ are chiefly used in cases of chronic eczema and lichen ; in the scaly diseases, lepra, lupus, and psoriasis.

39. *Arsenite of soda. M. Biett.*—Extract of conium, one scruple ; arsenite of soda, two grains. Make twenty-four pills. *Dose*—One or two daily. *Use*—As above.

40. *Hydrochlorate of iron.*—Hydrochlorate of iron, twelve grains ; gentian, in powder, twenty-four grains. Make twelve pills. *Dose*—One to four daily. *Use*—Employed with success by M. Biett in scrofulous eruptions.

41. *Sulphate of iron. M. Biett.*—Sulphate of iron, one scruple ; powdered mallows, twelve grains ; syrup, q. s. Make twelve pills. *Use and dose* the same.

EXTERNAL REMEDIES.

I. CATAPLASMS. LINIMENTS.

42. *Potato-poultice.*—Potato flour, infusion of marshmallows, of each, q. s. Mix the flour with a little cold water, and then boil it. M. Biett commonly employed this poultice with great benefit, in cases of eczema, impetigo, mentagra, &c.

43. *Charcoal poultice.*—Powdered charcoal, linseed meal, and warm water, of each, q. s. *Use*—In ulceration after ecthyma, &c.

44. *Conium poultice.*—Conium, two ounces ; water, two pints. Boil away one quarter, and to this add ground flaxseed, q. s. *Use*—Scrofulous ulcers.

45. Marshmallows infusion, one pint ; solution of sub-acetate of lead, one to two drachms. A lotion in cases of lichen or chronic eczema. Or,

46. Dulcamara, hyosciamus, solanum nigrum, of each a handful. Boil together, with some marshmallow roots, and use for the purpose of moistening compresses. Lichen, acne. Or,

47. Cyanuret of potassium, twelve grains; emulsion of bitter almonds, six ounces. In chronic eruptions with itching. Or,

48. Hydrocyanic acid, two drachms; corrosive sublimate, two grains; emulsion of bitter almonds, ten ounces. *Use*—As above. Or,

49. Extract of belladonna, two drachms; lime water, eight ounces; oil of sweet almonds, four ounces. A liniment. *Use*—For the inflamed surfaces in cases of eczema and impetigo. Or,

50. Alum, three drachms; hydrochlorate of ammonia, one drachm; Bareges' water, one ounce; water, half a pint. A lotion, towards the termination of eczema and impetigo. Or,

51. Subcarbonate of potass, one drachm; sublimed sulphur, two drachms; water, a pint. *Use*—In prurigo, especially when the itching has diminished. Or,

52. Acetate of ammonia, three ounces; alcohol, four drachms; rose-water, four ounces. In lichen. To be applied with a fine sponge, when the pruritus is excessive. Or,

53. Sulphuret of potass, one drachm; white soap, two drachms; distilled water, eight ounces. *Use*—In prurigo, scabies, porrigo.

54. Sulphate of zinc, acetate of lead, of each one scruple; rose-water, five ounces; mucilage of quince, one ounce. In some cases of eczema and impetigo of the face.

55. Nitric and hydrochloric acids, of each twenty drops; distilled water, ten ounces. *Use*—Lichen, chronic eczema.

56. *Alkaline lotion.*—Subcarbonate of potass, distilled water, of each two drachms; mucilage of bitter almonds, eight ounces. *Use*—Lichen, prurigo.

57. *Gowland's solution.*—Deuto-chloride of mercury, one, two, or three grains; emulsion of bitter almonds, six ounces. *Use*—Porrigo.

58. *Dupuytren's lotion.*—Sulphuret of potass, four ounces; sulphuric acid, half an ounce; water, two pints. *Use*—Scabies.

59. *Barlow's lotion.*—Sulphuret of potass, white soap, of each two drachms; lime-water, seven ounces; alcohol, one drachm. *Use*—Porrigo.

60. *Jadelot's liniment.*—Sulphuret of potass, six ounces; white soap, two pounds; olive oil, two pints; oil of thyme, two drachms. *Use*—Scabies and prurigo.

2. OINTMENTS. POWDERS.

61. *Alkaline ointment.*—Subcarbonate of potass, two drachms; lard, two ounces. *Use*—In pustular diseases and porrigo.

62. *Compound alkaline ointment.*—Subcarbonate of soda, two drachms; extract of opium, ten grains; slaked lime, one drachm; lard, two ounces. *Use*—In some cases of prurigo.

63. *Ointment of cyanuret of potassium.*—Oil of bitter almonds, two drachms; cyanuret of potassium, twelve grains; Galen's cerate, two ounces. *Use*—In lichen and prurigo, when the skin is very dry and the itching excessive.

64. *Hydrocyanic cerate.*—Hydrocyanic acid, twenty drops; cerate, two ounces. *Use*—In syphilitic ulcers.

65. *Ointment of cyanuret of mercury.*—Cyanuret of mercury, three to six grains; lard, one ounce. *Use*—As above.

66. *Ointment of carbonate of lead.*—Subcarbonate of lead, two drachms; prepared lime, half an ounce; Galen's cerate, two ounces. *Use*—In papular eruptions with itching.

67. *Chloride of lime ointment.*—Powdered chloride of lime, half an ounce; sweet-almond oil, two ounces; lard, three ounces. *Use*—As above.

68. *Proto-chloride of mercury ointment.*—Proto-chloride of mercury, twenty grains to a drachm; lard, one ounce. *Use*—In most chronic diseases, and towards the end of some scaly affections. Or,

69. White precipitate of mercury, half a drachm; camphor, ten grains; almond cerate, one ounce. *Use*—In acne and sycosis.

70. Proto-chloride of mercury and acetate of lead, of each two scruples; camphor, six grains; lard, half an ounce. *Use*—For tubercles.

71. *Ointment of deutoxide of mercury.*—Deutoxide of mercury, half a drachm; camphor, four grains; lard, an ounce. *Use*—In papular diseases of the face.

72. *Sulphuret of mercury ointment.*—Sulphuret of mercury, half a drachm; camphor, ten grains; cerate, one ounce. *Use*—In chronic, vesiculo-pustular affections.

73. *Sub-sulphate of mercury ointment.*—Sub-sulphate of mercury, one scruple; camphor, six grains; purified lard, one ounce. *Use*—Same as last.

74. *Ointment of proto-nitrate of mercury.*—Proto-nitrate of mercury, one scruple; lard, one ounce. *Use*—In lepra and psoriasis.

75. *Iodide of mercury ointment.*—Proto-iodide of mercury, twelve to twenty-four grains; lard, one ounce. Or, Deuto-iodide of mercury, twelve grains; lard, one ounce.

These preparations were introduced by M. Biett, and are extremely efficacious. M. Biett chiefly employed them in syphilitic eruptions, and in certain forms of inveterate scaly disease. The preparation with the deuto-iodide is by far the more active, and should therefore be applied to a much smaller surface of the skin. It is occasionally used as an escharotic in lupus.

76. *Iodide of sulphur ointment.*—Iodide of sulphur, fifteen to thirty grains; lard, one ounce. This preparation was also introduced by M. Biett; and, next to the former one, is that on which most reliance is to be placed. It is chiefly suited to cases of acne, prurigo, and scaly diseases.

77. *Depilatory ointment.*—Subcarbonate of soda, two drachms; lime, one drachm; lard, one ounce. *Use*—In porrigo.

78. *Banyer's ointment.*—Litharge, two ounces; calcined alum and calomel, of each one ounce and a half; Venice turpentine, half a pound; lard, two pounds. *Use*—Same as last.

79. *Hydriodate of ammonia ointment.*—Chloride of ammonium, eighteen grains; mutton suet, half an ounce; sweet-almond oil, two drachms. *Use*—As above.

80. *Hydriodate of potass ointment.*—Iodide of potassium, half a drachm; lard, one ounce. *Use*—Scrofulous ulcers, some papular eruptions, Arabic elephantiasis.

81. *Iodine ointment.*—Iodine, fifteen grains; iodide of potassium, one drachm; Rousseau's laudanum, two drachms; lard, two ounces. *Use*—As above.

82. *Soot ointment*—Soot, one drachm; lard, two ounces. In porrigo.

83. *Sulphur and charcoal ointment.*—Powdered charcoal, one ounce; sublimed sulphur, two ounces; lard, five ounces. *Use*—In porrigo.

84. *Sulphur and cinnabar ointment.*—Cinnabar, two drachms; sublimed sulphur, half an ounce; laudanum, two drachms; lard, five ounces. *Use*—Scabies and prurigo.

85. *Pringle's ointment.*—Root of the white hellebore powdered, two drachms; hydrochlorate of ammonia, one drachm; lard, two ounces. *Use*—As above.

86. *Helmerich's ointment.*—Sublimed sulphur, half an ounce; subcarbonate of potass, two drachms; lard, two ounces. To be divided into four portions. *Use*—Scabies. A portion to be rubbed in, night and morning, over the affected parts.

87. Sublimed sulphur, half an ounce; hydrochlorate of ammonia, two drachms; lard, two ounces. *Use*—As above.

88. Sublimed sulphur, five ounces; subcarbonate of potass, two ounces; water, one ounce; olive oil, four drachms. Dissolve the potass, then add the oil, and incorporate the sulphur. *Use*—Scabies.

89. Sublimed sulphur, white soap, of each two ounces. Dissolve the soap in a sufficient quantity of water, and add the sulphur gradually. *Use*—Scabies.

90. Sublimed sulphur, white soap, of each half an ounce; lard, two ounces. *Use*—Scabies.

91. *Willan's ointment.*—Subcarbonate of potass, half an ounce; red sulphuret of mercury, one ounce; rose-water, one ounce; oil of bergamotte, half an ounce; sublimed sulphur and lard, of each nine ounces. *Use*—Scabies.

92. *Turner's pitch ointment.*—Pitch, half an ounce; lard, an ounce. *Use*—

Scabies. This ointment was in much repute about the middle of the last century.

93. *M. Giroux's ointment.*—Pitch, two drachms; laudanum, a drachm; lard, an ounce. *Use*—In prurigo and scaly diseases.

3. CAUSTICS.

94. *Nitrate of silver lotion.*—Nitrate of silver, half a drachm; distilled water, six drachms. *Use*—In rupia, impetigo. A feather moistened with the lotion is passed over the diseased surface, which immediately afterwards is copiously sprinkled with water. Dilute sulphuric, nitric, or muriatic acids may be employed in the same manner.

95. *Binitrate of mercury.*—Protonitrate of mercury, one, two, or three drachms; nitric acid, an ounce. Lupus, syphilitic eruptions. A brush, moistened with the caustic, is passed lightly over a small extent of the diseased surface. The animal oil of Dippel, and the butter of antimony, are employed in the same way.

96. *Côme's powder.*—White oxide of arsenic, ten grains; sulphuret of mercury, two scruples; animal charcoal powdered, ten grains. *Use*—Ulcerated lupus. A small quantity to be moistened on some solid body, and spread with a spatula over a surface not to exceed three quarters of an inch in diameter.

97. *Dupuytren's powder.*—Arsenious acid, eight to twelve grains; calomel, an ounce. Mix carefully. *Use*—As above. This is a milder caustic, a small quantity of which is to be sprinkled over a surface, so as to form a thin covering.

98. *Chloride of zinc pastes.*—No. i. Flour, two parts; chloride of zinc, one part.

99. No. ii. Flour, three parts; chloride of zinc, one part.

100. No. iii. Flour, four parts; chloride of zinc, one part. Mix the zinc with the flour, adding as little water as possible; then expose the paste to the air until it absorbs enough of moisture to be fit for use. The dermis should be exposed before the paste is applied.

101. *Antimonial paste.*—Chloride of antimony, one part; chloride of zinc, two parts. Add flour according to the strength desired. *Use*—As above.

102. *Vienna caustic.*—Caustic potass and unslaked lime in powder, equal parts. *Use*—As above. This paste is diluted with alcohol, and applied with a spatula over a very small surface.

4. BATHS. FUMIGATIONS.

103. *Emollient bath.*—Potato-flour starch, one pound; cold water, one quart. Mix, and add four quarts of hot water; then boil to the consistence of a paste, and add the latter gradually to the bath.

104. *Gelatine bath.*—Prepared gelatine, a pound; dissolve in a quart of warm water; add four quarts of warm water, and boil for a quarter of an hour. Mix with the bath.

105. *Acid bath.*—Muriatic acid, two to four ounces; water, four hundred and sixty quarts. *Use*—Chronic prurigo and lichen.

106. *Alkaline bath*—Subcarbonate of soda, four to eight ounces; water, fourteen pails. *Use*—Chronic diseases of the skin.

107. *Sulphur baths.*—Sulphuret of potass, four to six ounces; water, fourteen pails. *Use.*—Chronic eruptions. To mitigate the action, if necessary, some starch or gelatine may be added.

108. *Iodine bath.*—Iodine, two to four drachms; iodide of potassium, four to eight drachms; water, fourteen pails. *Use*—As above.

109. *Mercurial bath.*—Deuto-chloride of mercury, from twenty-four grains to half an ounce, gradually; water, fourteen pails. *Use*—Scaly and syphilitic eruptions.

110. *Sulphur fumigation.*—Sulphur, half an ounce; evaporate on a warm plate, in an apparatus *ad hoc*. *Use*—Scabies, scaly diseases, lichen, prurigo.

111. *Cinnabar fumigation.*—Cinnabar, half an ounce to one ounce. The cin-

nabar is volatilized with five or six ounces of water in D'Arcet's apparatus, at 54° R. The patient remains in it from fifteen to twenty minutes. *Use*—Prurigo, syphilitic eruptions. General fumigation is not readily supported; hence M. Biett invented an apparatus for the purpose of fumigating locally.

112. *Vapor baths and douches.*—This is the best form in which baths can be administered; they are suited to almost every species of chronic disease of the skin. The patient may employ them for fifteen to twnety minutes, at a heat of 40° to 42° R.

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